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Theories of Personality

Duane P. Schultz • Sydney Ellen Schultz • Heather M. Maranges

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Theories of Personality

Duane P. Schultz

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Florida State University

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Preface

Each edition of a textbook must be as vital, dynamic, and responsive to change as the field it covers. To remain an effective teaching instrument, *Theories of Personality, 12th edition* must reflect the development of the field, both in theory and science-based knowledge, while also engaging and encouraging the learner. We have seen the focus of personality study shift from global theories, beginning with Sigmund Freud's 19th-century psychoanalytic theory of neuroses, to 21st-century models of how external and internal factors contribute to personality in nuanced ways. And we have seen the basis of personality exploration change from case studies of Western upper-middle-class patients with "neuroses" to systematic, scientific research with diverse populations. Contemporary work in the field is both conducted by and focuses on people diverse in gender, age, and sexual orientation as well as ethnic, racial, religious, and cultural heritage.

New and Expanded Coverage

Updates to this new edition of *Theories of Personality* are threefold. First, the 12th edition has been updated for scientific rigor, especially in terms of clarifying whether theories are supported and providing empirical evidence from diverse sources. This also includes a new chapter on modern adaptionist and whole trait theories in Chapter 15. Second, the 12th edition includes more pedagogically supportive content, such as the Pause for Reflection feature, figures, and updated learning objective review questions. Third, this edition focuses more explicitly on diversity, namely, of research and researchers. These are some of those essential updates:

- **New Research.** This 12th edition entails an extensive updating of research included across the chapters. Not only has outdated research been removed, but nearly 1,000 additional academic articles have been newly cited across 15 chapters. As a result, *Theories of Personality* presents the most cutting-edge "tests" of each theory of personality in an accessible way. This means that students are learning not just theories of personality but also the far-reaching effects of and contributors to personality according to psychological science conducted around the world with diverse people.
- **Evolutionary Theories of Personality.** Chapter 15 now covers a major set of theories for why specific personality traits emerged and why there is variation in them. In contrast to misconceptions about evolutionary theories of personality (e.g., that they entail essentialism), these theories provide rich perspectives on the benefits of a diversity of personality traits and combinations. Specifically, the all-new text covers theories for why we see patterns of specific emergence of traits (primal emotional systems, success of the individual, romantic and sexual partner choice, and social partner choice) as well as why there is variation in traits (assortative mating, trade-offs, frequency-dependence, biological sex differences, and environmental selection).
- **Whole Trait Theory.** Chapter 15 now also covers the cutting-edge model of personality that incorporates both external and internal factors to offer a fuller conception of what traits are: internal entities (explanation) that drive behaviors, which can be classified according to the trait taxonomy (description) and are shaped by the demands of situations and by reinforcements over time.
- **Pause for Reflection.** Students are invited to reflect on the material just read/learned to consider how it applies to their lives and personalities and to people and contexts they care about. This feature also provides jumping off points for discussion-based pedagogical approaches.
- There are also **new learning objectives, review questions, suggested readings, and vocabulary terms**, supporting the ease with which students learn and instructors teach.
- **Diversity.** This 12th edition highlights considerable cross-cultural research and a diversity of samples of research participants from Northern, Central, and Southern American, European, African, and Asian nations. All students should have the opportunity to learn about the application of personality theories to diversity and be introduced to diverse scholars. Crucially, students with diverse racial/ethnic, sexual, and gender identities may especially benefit from reading about how theories of personality intersect with those identities and the experiences of people from historically marginalized groups. This new content is center stage in the DEI Spotlight.

- **DEI Spotlight.** At the end of each chapter, this section explores how researchers and research building on the different theories of personality help us understand and address issues of diversity, equity, and inclusion.

Chapter-specific revisions to the 12th edition include:

Chapter 1

- Added new Pause for Reflection feature
- Updated images
- Updated definition of *personality*
- Reframed, reorganized, and updated coverage of concerns related to diversity—culture, race, ethnicity, and gender—in personality measurement and differences
- Added new research to most sections, including Personality and Social Media (all subsections), Different Cultural Beliefs About Destiny, Individualism and Collectivism, Self-enhancement, Self-Report Personality Measures, and Diversity Considerations in Personality Measurement and Differences
- Added more content, clearer definitions, and examples to Assessing Your Personality section
- Updated Review Questions

Chapter 2

- Updated and combined sections on research findings and Freud's theories
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from more than 30 academic journal articles, most published since 2012
- Added Pause for Reflection feature to most sections to enhance reader understanding
- Added further criticisms of the misogynistic nature of Freud's theory
- Updated DEI Spotlight

Chapter 3

- Updated and combined sections on research findings and Jung's theories
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from around 20 academic journal articles, published since 2013
- Added "Pause for Reflection" feature to most sections, to enhance reader understanding.
- Updated and new coverage of how Jung's theory was in some ways ahead of its time (e.g., animus and anima), and empirical and theoretical criticism of the Myers-Briggs Type Indicator (MBTI)
- Updated DEI Spotlight
- Revised Review Questions

Chapter 4

- Updated and combined sections on research findings and Adler's theories
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from nearly 30 academic journal articles published since 2015
- Updated examples (e.g., individuals who ultimately overcame their inferiority complexes to excel in an area that challenged them as children)
- Added Pause for Reflection feature to most sections, to enhance reader understanding
- Updated DEI Spotlight

Chapter 5

- Updated and combined sections on research findings and Horney's theories
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from over 20 academic journal articles published since 2011
- Added Pause for Reflection feature to most sections to enhance reader understanding
- Expanded discussion of the value of Horney's feminist theories, which were in many ways ahead of their time
- Added DEI Spotlight
- Revised Review Questions
- Updated Suggested Readings to include Horney (1967)

Chapter 6

- Updated and combined sections on research findings and Erikson's theories
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from around 50 academic journal articles, published since 2000, with one published in 1993
- Added Pause for Reflection feature to most sections to enhance reader understanding
- Reorganized Diversity and Identity coverage
- Added DEI Spotlight
- Revised Review Questions

Chapter 7

- Updated and combined sections on research findings and Allport's theories
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from around 60 academic journal articles published since 2000, with four published from 1946 to 1960 by Allport himself.

- Added Pause for Reflection feature to most sections, to enhance reader understanding
- Reorganized sections: The Study of Values and Expressive Behavior
- Added DEI Spotlight
- Revised Review Questions
- Updated Suggested Readings

Chapter 8

- Updated and expanded description of factor analyses
- Expanded coverage of methods of behavioral genetic research for more detail
- Expanded and clarified coverage of contributions made to Big Five versus five-factor model by both Costa-McCrae and Goldberg
- Updated definitions of each Big Five traits: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness
- Added more descriptive coverage of Big Five measures
- Clarified and expanded cultural differences in personality: measurement model doesn't differ, but traits and their item intercorrelations can
- Clarified and expanded stability personality coverage: people's traits remain relatively stable, but people mature in personality in similar ways
- Updated and combined sections on research findings on traits and models
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from over 100 academic journal articles published since 2000, with two published in 1990 and 1993
- Added Pause for Reflection feature to most sections to enhance reader understanding
- Added DEI Spotlight section
- Revised Review Questions
- Updated Suggested Readings

Chapter 9

- Updated and combined sections on research findings and the sections that describe models
- Expanded discussion of how higher-level needs entail privilege to pursue—that is, not everyone has their basic needs met
- Updated tables and boxes
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from over 40 academic journal articles published since 2008, with one published in 1991 and two in 1966
- Added Pause for Reflection feature to most sections to enhance reader understanding
- Added DEI Spotlight section
- Revised Review Questions
- Updated Suggested Readings

Chapter 10

- Updated and combined sections on research findings and the sections that describe models
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from around 70 academic journal articles published since 2001, with one published in 1994
- Added Pause for Reflection feature to most sections, to enhance reader understanding
- Added DEI Spotlight section
- Revised Review Questions

Chapter 11

- Updated and combined sections on research findings and the sections that describe models
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from over 30 academic journal articles published since 2000, with three published in 1965, 1991, and 1996
- Added Pause for Reflection feature to most sections, to enhance reader understanding.
- Added DEI Spotlight section
- Revised Review Questions
- Updated Suggested Readings

Chapter 12

- Updated and combined sections on research findings and the sections that describe models
- Added new sections, including Behaviorism and Personality, Self-Regulation and Self-Control, DEI Spotlight
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from over 60 academic journal articles published since 2001, with one published in 1992
- Added Pause for Reflection feature to most sections to enhance reader understanding
- Revised Review Questions

Chapter 13

- Updated and combined sections on research findings and the sections that describe models
- Added new sections:
  - Behaving Well: The Bright Side of Observational Learning
  - Self-Efficacy Predicts Positive Outcomes
  - Diversity and Self-Efficacy
- Added DEI Spotlight
- Updated images
- Updated and new research and theory added, including summary of findings or arguments from more than 120 academic journal articles published since 2001, with four published in 1985, 1989, 1990, and 1997
- Added Pause for Reflection feature to most sections to enhance reader understanding
- Revised Review Questions
- New Learning Objectives

Chapter 14

- Updated and combined sections on research findings and the sections that describe models
- Added sections: On the development, correlates and diversity of optimism and pessimism
- Added DEI Spotlight
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from over 160 academic journal articles published since 2000, with one published in 1986 by Seligman himself and another published in 1999
- Added Pause for Reflection feature to most sections to enhance reader understanding
- Revised Review Questions
- Added new Learning Objectives

Chapter 15

- Updated research throughout chapter
- Updated discussions, including the following sections:
  Evolutionary Theories of Personality and Variation in Traits
- Added DEI Spotlight
- Updated Chapter Summary
- Updated images
- Updated and added new research and theory, including summary of findings or arguments from over 120 academic journal articles published since 2001, with two published in 1995 and 1998
- Added Pause for Reflection feature to most sections to enhance reader understanding
- New Review Questions, Learning Objectives, and Suggested Readings

Organization of the Text

The 12th edition of *Theories of Personality* retains its orientation toward undergraduate students who have had little previous exposure to personality theories. Our purpose is to reach out to beginning students and ease their task of learning about the study of personality while also introducing empirical evidence as the source of knowledge to confirm or disconfirm tenets of personality theories. We have chosen theorists who represent psychoanalytic, neo-psychoanalytic, life-span, genetics, humanistic, cognitive, behavioral, social-learning approaches, adaptationist, and whole trait theories as well as clinical and experimental work. The second half of the concluding chapter reviews these perspectives via the factors that contribute to personality: the genetic, environmental, learning, parental, developmental, conscious, and unconscious factors.

Each theory in the text is discussed as a unit, with a focus on founding theorists that, like the field of personality itself, moves toward a focus on the theories and science as we move through the field's theories chronologically. Most chapters focus on a single theorist and theory, with the final two expanding coverage of the most modern theories of personality. We aim to present each theory clearly to convey its most important ideas, assumptions, definitions, and methods. We discuss each theorist's methods of assessment as well as their own and other empirical research, and we offer evaluations and reflections.

Instructor Resources

Additional instructor resources for this product are available online. Instructor assets include an Instructor's Manual, PowerPoint® slides, and a test bank powered by Cognero®. Sign up or sign in at www.cengage.com to search for and access this product and its online resources.

Heather M. Maranges

Cengage MindTap

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Use MindTap for Schultz, *Theories of Personality*, 12th edition as-is, or personalize it to meet your specific course needs. You can also easily integrate MindTap into your Learning Management System (LMS).

About the Author

Heather M. Maranges is a theoretical and empirical scholar whose research has been featured in some of the top tier academic journals in personality and social psychology. She has also authored and edited book chapters, encyclopedia entries, and a textbook. She was awarded her PhD in social and personality psychology from Florida State University (Tallahassee, Florida, United States) and the Horizon Postdoctoral Fellowship for research at Concordia University (Montreal, Quebec, Canada) before serving as Director of Research at a program focused on moral character at Wake Forest University (Winston Salem, North Carolina, United States). Currently, Dr. Maranges conducts research at Florida State University. Her program of research focuses on what facilitates and hampers cooperation and flourishing, including individual differences, moral cognition, childhood ecologies, and social bias and stereotyping.

Chapter 1

Personality: What It Is and Why You Should Care

Learning Objectives

1.1 Define personality in two sentences.

1.2 List three examples of how social media use interacts with our personalities.

1.3 Describe how culture shapes personality, using four examples.

1.4 Analyze what makes a measure reliable and valid.

1.5 Outline the strengths and weaknesses of each of the following measurements strategies, considering quantitative versus qualitative data as well as objectivity versus subjectivity: self-report measures, projective techniques, clinical interviews, behavioral observations, experience sampling.

1.6 Identify three important considerations about how diversity (e.g., race, ethnicity, gender) impacts personality or personality measurement.

1.7 Compare and contrast correlational and experimental research designs.

Take a Look at the Word

Let's start by examining the word you're going to be dealing with this semester—*personality*. It not only defines this course, but it will also help define your life as well.

Here are three standard dictionary definitions of the word taken at random:

- The state of being a person.
- The characteristics and qualities that form a person's distinctive character.
- The sum total of all the physical, mental, emotional, and social characteristics of a person.

You get the idea. It's everything about you that makes you what you are—a unique individual who is different, in large and small ways, from everybody else. It's a simple word, but a difficult concept to truly comprehend, which is why it takes a book and a semester to begin to learn it. We're going to try to understand it, or at least learn something about it, by exploring the various ideas that psychologists have advanced over the years to try to explain it.

We have organized those ideas—those theories—in terms of their different outlooks on human nature, beginning with Sigmund Freud. We will deal with extensions that grew out of his theory of psychoanalysis and talk about the people who revised his ideas or

rebelled against them. After that, we will move on to what is called the lifespan approach, tracking personality development from birth all the way to old age. We'll then discuss theories that focus on individual personality traits, on psychological health, on predetermined behavior patterns, on cognitive learning from social situations, and on evolutionary adaptive value. We will also offer some suggestions and conclusions from our exploration of personality.

It's important to recognize that personality theorists from the last century rarely considered the importance of ethnic and cultural differences. We will discuss that it is not meaningful to generalize to all people from, for example, ideas that one theorist based on clinical observations of European women with neuroses, or that another theorist based on researching men in American colleges. Therefore, when we discuss research conducted on these theories and describe their use for real-world problems, such as in diagnosis and therapy, we'll also try to show the influence of age, gender, race, ethnic and national origin, culture, religious beliefs, and other demographic variables on how personality develops, functions, and is measured.

To make your study easier, we will include Highlights sections, giving brief summaries of research findings, as well as chapter outlines, summaries, review questions, and reading lists. Important words will be defined in the margins, and these definitions will also be listed in the glossary toward the end of the book.

Everybody Has One

Everybody has one—a personality, that is—and yours shapes your interests, social approach, relationships, goals, and accomplishments. It is no exaggeration to say that your personality is one of your most important assets. It has already helped shape your experiences up to now, and it will continue to do so for the rest of your life. Everything you have accomplished to date, all of your expectations for the future, your close relationships, your academic and occupational trajectory, your financial decision making and life planning, and your health can all be influenced by your personality and the personalities of those around you. Your personality can limit or expand your options and choices in life, prevent you from sharing certain experiences, or enable you to take full advantage of them.

How often have you said that someone has a *great* personality? By that you might mean the person is affable, easy to get along with, reliable, positive, or open to new things but responsible—the kind of person you might choose to be a friend, roommate, or colleague. If you are a manager, you might choose to hire this person. If you desire a romantic relationship, you might want to be romantically involved with this person, basing your decision on your perception of their personality. You might also know someone you describe as having a *terrible* personality. They may be aloof, unfriendly, unreliable, negative, or closed off to new things. You would not hire them or want to associate with them, and they may also be shunned, rejected, and isolated by others.

Keep in mind that while you are making judgments about the personalities of other people, they are making the same kinds of judgments about you. These mutual decisions that shape the lives of both the judged and the judges are made countless times, every time we are in a social situation that requires us to interact with new people. Of course, the number and variety of social situations you are involved in are also determined by your personality—for example, your relative extroversion. You probably know how extroverted you are, just as you no doubt have a reasonably clear impression of what your overall personality is like.

Describing Your Personality

Of course, it's glib and overly simple to try to sum up the total constellation of someone's personality characteristics by using such fuzzy terms as *great* and *terrible*. The subject of personality is too complex for such a simplified description because humans are too complex and flexible in different situations and with different people. We need to be more precise in our language to adequately define and describe personality. For that reason, psychologists have devoted considerable effort to developing measures to assess personality, as we'll discuss throughout the book.

You may think you don't need a psychological measure to tell you what your personality is like, and, in general, you may be right. After all, you probably know yourself better than anyone else. If you were asked to list the words that best describe your personality, no doubt you could do it without too much thought, assuming you were being honest with yourself.

Pause for Reflection

What are 6–10 words that best describe your personality? Try writing them down.

How many words did you think of? Six? Ten? A few more? A widely used personality test, the Adjective Check List, offers an astonishing 300 adjectives that describe personality.

People responding to this measure choose the ones that best describe themselves. No, we're not going to ask you to go through all 300 adjectives, only the 30 listed in Table 1.1. Place a check mark next to the ones you think apply to you. When you're done, you'll have a description of your personality in greater detail, but remember that in the actual test, you would have another 270 items to pick from.

How Does Personality Develop?

Our focus here is not on what *your* personality is like, though you will likely gain insights on that from this text. What we will be studying are the forces and factors that shape personality. Later in this chapter, and throughout the book, we will deal with some basic questions about the nature of personality—for example, whether we are born with a certain type of personality or learn it from our parents, whether personality is influenced by unconscious forces, and whether it can change as we get older.

We will cover a variety of theories that have been proposed to help answer these and related questions about human nature. After we have discussed them—what they are, how they came about, and what their current status is—we will evaluate how useful they are in answering our questions and contributing to our understanding of how personality develops. We may think of each of these theorists as contributing individual pieces to a huge jigsaw puzzle, which is why we study their ideas, even though some of their concepts are decades old. Psychologists continue to try to fit these pieces together, challenging the older ones, to bring forth a clearer and more complete understanding of what makes us the way we are and shapes how we see and navigate the world. Indeed, these research goals are pursued by many scientists in the Society for Personality and Social Psychology, the world's largest organization of personality and social psychologists, and a division of the American Psychological Association.

Ways of Looking at Personality

We talked about formal definitions of personality earlier. Now let's get away from dictionary definitions and consider how we use the word in our everyday lives. We use it a lot when we are describing other people and ourselves. One psychologist suggested that we can get a very good idea of its meaning if we examine our intentions—what we mean—whenever we use the word *I* (Adams, 1954). When you say I, you are, in effect, describing aspects of your personality—your likes and dislikes, fears and virtues, strengths and weaknesses. The word *I* is what defines you as an individual, separate from everybody else.

How Others Perceive Us

Another way of trying to understand personality is to consider its source. The word goes back to about the year 1500 and derives from the Latin word *persona*, which refers to a mask used by actors in a play. It's easy to see how persona came to refer to our outward appearance, the public face we display to the people around us. Based on its derivation, then, we might conclude that personality refers to our external and visible characteristics, those aspects of us that other people can observe. Our personality would then be defined in

Table 1.1 Adjective check list

Make a check mark next to the words you believe apply to your personality.

_____ affectionate	_____ ambitious	_____ assertive
_____ boastful	_____ cheerful	_____ cynical
_____ demanding	_____ dominant	_____ fearful
_____ forceful	_____ generous	_____ high-strung
_____ impatient	_____ insightful	_____ meek
_____ moody	_____ optimistic	_____ opinionated
_____ persistent	_____ prudish	_____ relaxed
_____ sarcastic	_____ sensitive	_____ sociable
_____ submissive	_____ tolerant	_____ trusting
_____ uninhibited	_____ vindictive	_____ withdrawn

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Is our personality just how others perceive us?

terms of the impression we make on others—that is, what we appear to be. From that perspective, personality is the visible aspect of one's character as others perceive it. In other words, our personality may be the mask we wear when we face the outside world.

But is that all we mean when we use the word *personality*? Are we talking only about what we can observe or how another person appears to us? Does personality refer solely to the mask we wear and the role we play? Surely, when we talk about personality, we mean more than that. We mean to include many different attributes of an individual, a totality or collection of various characteristics that goes beyond superficially evident qualities. The word encompasses a host of subjective social and emotional qualities as well as ones that we may not be able to observe directly, that a person may try to hide from us, or that we may try to hide from others.

Stable and Predictable Characteristics

In our use of the word *personality*, we are referring to enduring characteristics. We assume that personality is relatively stable and predictable. Although we recognize, for example, that a friend may be calm much of the time, we know that they can become excitable, nervous, or panicky at other times when the situation strongly calls for it. Sometimes our personality can vary with the situation. Yet although it is not rigid, it is generally resistant to sudden changes and does give us an idea of how people will act in a variety of contexts. In the 1960s, a debate erupted within psychology about the relative impact on behavior of such enduring personal variables as traits and needs versus variables relating to the situation (Mischel, 1968, 1973).

The controversy continued for some 20 years and concluded with the realization that the "longstanding and controversy-generating dichotomy between the effect of the situation versus the effect of the person on behavior . . . is and always was a fake" (Funder, 2001, p. 200). And so the issue was resolved by accepting an interactionist approach, agreeing that enduring and stable personal traits, changing aspects of the situation, and the interaction between them must all be considered in order to provide a full explanation for human nature.

Unique Characteristics

Our definition of personality may also include the idea of human uniqueness. We perceive similarities among people, yet we sense that each of us possesses special attributes that distinguish us from all others. These unique characteristics feed into our thoughts, emotions, and behaviors. Thus, we may suggest that **personality** is an enduring and unique cluster of characteristics manifest in patterns of thoughts, feelings, and behaviors that may change in response to different situations.

Even this, however, is not a definition with which all psychologists agree, in that they may emphasize one part of it or another as more or less central. To achieve more precision, we must examine what different personality theorists mean by the term. Different theorists, as we will discuss, offer a unique version that is based on their experiences and studies. As personality psychology develops over time, we discover that clearer and more sound definitions emerge as more systematic scientific and theoretical work is done. And that is what this book is all about: reaching an understanding of the different theories of personality and examining the various ways of defining the word *I*.

Personality and Social Media

Our increasing, almost constant use of various social media to interact with other people in a virtual reality rather than in person has led to a great deal of recent research that attempts to understand the implications of this technology for our personalities. There are at least three ways in which social media and personality may interact to affect one another, leading to three

personality The unique, relatively enduring internal and external aspects of a person's character manifest in patterns of thoughts, feelings, and behaviors that influence behavior in different situations.

questions to which psychologists are increasingly seeking answers.

1. Do we present our real selves on social media?
2. Does the use of social media influence or change our personalities?
3. Do people with different personalities use social media in different ways?

Are You the Same Person Online?

We discussed earlier that one way of defining personality is in terms of the mask we wear, the public face we display to the people around us. Increasingly, many of us display another face, not in person, but through the internet on social media sites such as Instagram, Facebook, Twitter, and TikTok. As a result, another way of defining our personality may include how we behave and others observe us online.

But are they perceiving us as we really are, or are we creating some idealized self-image online that we want to display to other people? Are we pretending to be someone we are not, or are we conveying an accurate description of our personality? In a research study with U.S. adults, most people admitted to lying about themselves online and expected others to lie about their age, gender, activities, interests, and appearance as well (Drouin et al., 2016). A large-scale study in Germany, however, found that many people have a tendency to present themselves online as being much more emotionally stable than they really are (Blumer & Doring, 2012). This may be especially true of adolescents (12- to 18-year-olds) who are beginning to establish their independent personas and purposefully share content to appear interesting, well liked, and attractive, according to research done in the United States (Yau & Reich, 2019).

Nevertheless, people might not be self-presenting online more than they are in face-to-face interactions. Studies conducted in the United States and in Germany found that depictions of personalities presented online are at least as accurate as those conveyed in face-to-face interactions (Gosling et al., 2007; Back et al., 2010).

The extent to which people express their personalities honestly may depend on personality itself. Other later studies have found that those who are introverted, neurotic, lonely, and socially awkward find it easier to express their true selves (their real personalities) online instead of in person (Marriott & Buchanan, 2014). It has also been found that those who feel they are able to express their true selves are more active on Facebook and other social media sites than those who do not feel that way (Seidman, 2014). Personality expression may also depend on the sort of social media too: on Facebook, people engage in less neurotic, open, and agreeable behavior compared to offline, and on Snapchat, people behave more extraverted (compared to offline) and open (compared to offline and on Facebook; Taber & Whittaker, 2018).

And what about selfies, those photos we take of ourselves? How accurate are they in showing our true selves? Or are they merely posing and posturing for effect, to impress others—to star in our own "reality shows?" Research has found that more women than men send selfies, and that excessive use of them can make the sender less likable and even reduce the intimacy or closeness of friendships. They can even reinforce the idea that how people look is more important than how they actually behave in real life toward their friends (Drexler, 2013; Rutledge, 2013).

Of course, as you know, we are not always honest in how we depict ourselves in person either, particularly when we meet new people we want to impress, like a date or an employer. With people we have known for a while, with whom we feel secure and have an established relationship, we may be less likely to pretend to be something we are not. Perhaps the major difference with social networking sites is that there is a much wider and more instantly reachable audience than in our everyday offline lives.

In addition, we now know that what we post about ourselves can also have great potential consequences to our careers and future when prospective employers find "inappropriate content" such as drunkenness, sexual displays, and use of profanity on a candidate's social media sites. One study found that evaluations of Facebook pages containing negative content resulted in false perceptions of that person's personality. Sites of people with no inappropriate displays resulted in more accurate evaluations of the person's personality, which, in the real world, can make the difference between being hired for a job or accepted by a graduate school (Goodman et al., 2014).

How Does Social Media Influence Our Personality?

Psychologists have found that the use of online social networking sites like Facebook can both shape and reflect our personalities. One study of adolescents in China aged 13 to 18 found that excessive time spent online was associated with significant levels of anxiety and depression when compared to teenagers who spent considerably less time online (Lam & Peng, 2010). Indeed, in a survey of over 700 college students, researchers find that the more people use Facebook

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Social media affects how we behave online, but our personalities also shape how we use social media.

to surveil others, the more envy they feel, and, consequently, the more depressive symptoms they experience (Tandoc et al., 2015). Similarly, other research found that high levels of social media use can reduce psychological well-being (how happy we feel) and decrease the quality of relationships with friends and romantic partners (Blais et al., 2008; Huang, 2010a; Kross et al., 2013).

A survey of college students in the United States found that those who spent time talking with their parents on the telephone had more satisfying personal and supportive relationships with them than students who kept in touch with their parents through social networking sites. In addition, college students who communicated with their parents via social media sites reported greater loneliness, anxiety, and conflict in their relationships with their parents (Gentzler et al., 2011).

Studies conducted in such diverse countries as the Netherlands, Serbia, China (Hong Kong), and Korea have demonstrated that those who reported excessive use of social media tend to be more lonely, introverted, and low in self-esteem than those who use it less (Baek et al., 2013; Milosevic-Dordevic & Zezelj, 2013; Muusses et al., 2014; Yao & Zhong, 2014). Spending too much time online can also lead to addiction, which can be just as obsessive and excessive as addiction to alcohol, drugs, or gambling. Excessive online use has also been associated with changes to regions of the brain that are linked to depression and increased irritability (Mosher, 2011).

How Does Our Personality Influence Our Use of Social Media?

In addition to affecting our personalities, social media use can be affected by our personalities. Studies in both Eastern and Western cultures found that those who were more extraverted and narcissistic (who had more inflated, unrealistic self-concepts) were much more likely to use Facebook than those who did not score high on those personality characteristics. More narcissistic teenagers were also more likely to update their Facebook status more frequently (Kuo & Tang, 2014; Michikyan et al., 2014; Ong et al., 2011; Panek et al., 2014; Winter et al., 2014).

Agreeableness is also positively related to active social media use, meaning that people who are more agreeable engage more on Facebook, for example by commenting, chatting more on Messenger, and posting more photos (Gerson et al., 2017). Other studies suggest that those who report high use of social networking sites tend to be more extraverted, more open to new experiences, lower in self-esteem and socialization skills, less conscientious, and lower in emotional stability than those who report lower levels of usage (Blackhart et al., 2014; Correa et al., 2010; Mehdizadeh, 2010; Papastylianou, 2013; Ross et al., 2009; Weiss, 2014; Wilson et al., 2010).

Personality traits also affect *how* people engage on social media—whether in healthy or unhealthy, kind or unkind ways. People high in openness, agreeableness, and experience seeking display intention to comment kindly and civilly on Facebook, whereas people high in attentional impulsivity and boredom susceptibility, and who use the platform intensely, display intentions to comment unkindly and uncivilly (Koban et al., 2018). In another set of studies, researchers found that people in the United States with lower self-control are more likely to use Facebook generally, to manage their reputations (e.g., posting edited pictures but not unflattering ones, bragging about themselves, and avoiding controversial topics), and to use it in ways that evoke negative feelings (e.g., by comparing themselves to others and expecting consistent positive feedback; Maranges et al., 2023).

Finally, what about the personalities of people who engage in online trolling—deliberately hurting, harassing, and upsetting others by posting hateful, inflammatory, and derogatory comments about them? The evidence shows that trolls are mostly men with an average age of 29, who, as you might expect, score high in sadism. They take pleasure in degrading others (Buckels et al., 2014; Lewis, 2014). Research done with over 800 college students in Turkey found that people with antisocial traits—Machiavellian, narcissistic, psychopathic, and aggressive—"trolled" others on social media more (Manuoğlu & Öner-Özkan, 2022).

Pause for Reflection

How do you think your own personality shapes and is shaped by your online personality? Are you the same person online that you are in-person?

The Role of Race and Gender in Shaping Personality

The personality theorists we cover in this book offer diverse views of the nature of the human personality. Despite their disagreements and divergences, however, many have certain defining characteristics in common. Most are White, of European or American heritage, and most are men. The ethnocentrism, racism, and sexism of the historical periods in which many of these theorists were developing their ideas means that their theories were able to rise to the top, predominate, and move the field of personality psychology forward. In most fields, educational and professional opportunities for women and people of ethnic and racial minority groups were severely limited. We aim to correct for this limitation by including more information on implications of the specific theory for diversity, equity, and inclusion for individuals, families, and society in the DEI Spotlight sections in each chapter.

In addition, in the field of personality theory, virtually all the subjects on which the earlier theories were based were also White people. Yet, the personality theorists confidently offered theories that were supposed to be valid for all people, regardless of gender, race, or ethnic origin.

None of the theorists stated explicitly that their views applied only to men or to White people or to Americans, or that their ideas might not be useful for explaining personality in people of other backgrounds. Although the theorists accepted, to some degree, the importance of social and environmental forces in shaping personality, they tended to ignore or minimize the influence of class, race, and ethnic background.

We know from our own experiences that our family members, friends, coworkers, classmates, and acquaintances were exposed to different childhood influences than we were and that they grew up to have different personalities. We also know from research in social psychology that children from different environments—such as a predominantly White Midwestern town, a Los Angeles neighborhood of mostly Latino families, an Appalachian Mountain village, or an affluent Black suburb—are exposed to vastly different influences. If the world in which people live and the factors that affect their upbringing are so different, then surely their personalities can be expected to differ as a result. Indeed, they do.

The Role of Culture in Shaping Personality

The influence of cultural forces on personality is widely recognized in psychology. A specialty area called cross-cultural psychology has fostered a great deal of research supporting the conclusion that personality is formed by both genetic and environmental influences and that "among the most important of the latter are cultural influences" (Triandis & Suh, 2002, p. 135).

This was demonstrated in a study of Japanese people who emigrated to the United States, compared to those who stayed in Japan. Those who moved became much more "American" in their personalities. They changed in significant ways in response to their changed culture (Gungor et al., 2013).

Other research showed that recent Chinese immigrants to Canada demonstrated the same low level of extroversion as people from Hong Kong who did not emigrate. However, Chinese immigrants who had lived in Canada at least 10 years, and thus had greater exposure to Western culture, scored significantly higher in extraversion than did more recent immigrants or the Hong Kong participants. Cultural forces had exerted a significant impact on this basic personality characteristic (McCrae et al., 1998).

Anxiety and other negative emotions may also be related to cultural differences. When the experiences of Asian American students were compared with those of European American students in a daily diary study, it was found that the Asian Americans reported a far greater number of negative emotions in social situations than the European-Americans did (Lee et al., 2006). Western people in general, and Americans in particular, also exhibit greater optimism and view themselves and their future more positively. They even consider their sports teams, cities, and friends to be better than they are, but people in Asian cultures do not show this positivity bias (Endo et al., 2000).

There are even large-scale cultural differences in brain activity and genetic makeup, which have been demonstrated in the field of cultural neuroscience (Azar, 2010). Using measures of brain wave activity, researchers found differences in brain function between people in Eastern and Western cultures when responding to the same stimuli (Park & Huang, 2010). One study found brain wave activity of Japanese and American people to differ in reaction to the same visual stimuli; the differences paralleled each culture's measured level of submissiveness or dominance (Freeman et al., 2009). We will examine a number of

other examples in this section, and throughout the book, of the many ways in which the culture we live in shapes and molds our personalities.

Different Cultural Beliefs About Destiny

The concept of *karma* has for centuries shaped the outlook of the people of India and other countries that accept Hinduism or Buddhism. It may be conceived of as a fatalistic and deterministic view of human nature. The consequences of our present and past actions are believed to determine our destiny or fate, our happiness or unhappiness in the future. In other words, events don't occur because we make them happen but because they were destined to happen.

Thus, in this view, our fortune or misfortune, health or sickness, happiness or unhappiness are preordained and independent of our own actions. You can understand how this belief may lead to a passive, resigned personality type, accepting whatever comes one's way and not being motivated to take action to change it. Contrast this with a view more typical of American culture that emphasizes free choice and action, and the role of our own personal effort and initiative in bringing about our personal success or failure.

Research shows substantial cultural differences between East and West in this notion of fate attribution or destiny (Norenzayan & Lee, 2010). Experimental work with over 1000 Indian and American adults found that Indians perceived karmic justice as more inevitable and felt less revengeful than Americans (Goyal & Miller, 2022). Reincarnation beliefs helped explain this cultural difference, with Indians believing more in reincarnation than Americans. However, there is also evidence that as Eastern cultures such as China modernize and become more Westernized, that cultural belief is reduced (Wong et al., 2010). Nuanced research has demonstrated that similar beliefs about fate in Christian Canadians and Americans, Hindu Indians, and Singaporean Buddhists are based on similar personality traits, patterns of feeling and thinking, including tendencies toward intuitive thinking, mentalizing, dualism, and teleological thinking (White et al., 2021). Furthermore, in a study with over 20,000 adults within Western countries, including the United States, Canada, United Kingdom, and Australia, personality differences shaped differences in belief in fatalistic determinism, or that actions and events are caused by fate. The higher people are in aggression, conventionalism, traditionalism, social dominance, need for closure, and emotionality, and the lower they are in honesty, extraversion, agreeableness, conscientiousness, and openness, the more they believe in fatalist determinism (Costello et al., 2020).

Individualism and Collectivism

Personality differs across cultures, largely because of what attributes are culturally important and therefore selected for and encouraged. One overarching cultural difference, particularly between the East and the West, is emphasis on **individualism** versus **collectivism**. Individualism emphasizes the individual, *inde*pendence, and relationships with other individuals, whereas collectivism emphasizes wholeness of the group, *inter*depependence, and communality. Western (e.g., North American, European, Australian) cultures tend to be individualist, whereas Asian (e.g., Chinese, Japanese) cultures tend to be collectivist (Kashima et al., 2004). Remember, these differences are on average and do not describe every individual within these societies, as people differ vastly in these characteristics even within these cultures. Furthermore, both Western and Eastern cultures themselves vary vastly in their histories, mores, and priorities. Refer to Figure 1.1.

In an individualist society, the focus is on personal freedom, choice, and action. In a collectivist society, the focus is on group norms and values, group role expectations, and other cultural constraints on behavior. People in individualist, compared to collectivist, cultures show greater extraversion, self-esteem, happiness (or subjective well-being), optimism about their future, and a belief in their ability to control and direct their lives (e.g., Arpaci et al., 2018; Morling et al., 2002; Wong et al., 2009).

College students in the United States scored significantly higher than college students in Japan on measures of self-efficacy—the feeling of being adequate, efficient, and competent in coping with life and in exerting control over life events (Morling et al., 2002). College students in Australia reported being more agreeable, conscientious, optimistic, and satisfied with their lives than students in Singapore reported (Wong et al., 2009).

Genetic differences between people in collectivist versus individualist cultures have been linked to lower levels of anxiety and depression in collectivist

individualism Perspective that emphasizes the individual, *inde*pendence, and relationships with other individuals, in contrast with collectivism.

collectivism Perspective that emphasizes wholeness of the group, *inter*depependence, and communality, in contrast to individualism.

Figure 1.1

Comparing individualist versus collectivist cultures

Individualist Culture	Collectivist Culture
• Personal identity is emphasized • Views people as unique • Encourages self-expression • Emphasizes competitiveness	• Social identity is emphasized • Views people as part of a group • Discourages self-expression • Emphasizes group harmony

cultures and higher levels in individualist cultures (Chiao & Blizinsky, 2010). Other research found differences in subjective well-being between Asian American students and European American students at the same university in the United States. The European American students attained their feeling of well-being by pursuing goals for the purpose of personal satisfaction. The Asian American students seemed to "attain and maintain their well-being by achieving goals that they pursue to make important others [such as their parents] happy and [to] meet the expectations of others" (Oishi & Diener, 2001, p. 1680). Interestingly, in research with 119 samples from 69 distinct countries and over 200,000 participants, in more individualist cultures, emotional experiences of individuals were more similar to emotional experiences of other people in their culture compared to people in more collectivist cultures (Vishkin et al., 2022). The more people stuck to the emotional norms of their cultures, the more satisfied they were with their lives.

Individualism may be associated with more positive views of the self compared to collectivism. As evidence, a comparison of Japanese and American college students revealed that the American students were far more likely to use positive terms to describe themselves. The Japanese students were more likely to use negative terms (Kanagawa et al., 2001).

Thus, the motivations, satisfactions, and attributes of people differ with cultural background. Put another way, the degree to which a culture focuses on and encourages individualism or collectivism has a powerful effect on the personality of its inhabitants.

Self-Enhancement

Self-enhancement is defined as the tendency to promote oneself, to engage in behaviors that make one appear to have more positive traits, or to maintain unrealistically positive views of oneself. This tendency is more common in Western cultures. The opposite of that, self-effacement, is considered to be more in agreement with the cultural values of Eastern societies. This was supported in a laboratory study comparing Canadian and Japanese college students. Self-enhancement was far more prevalent among the Canadian students; self-criticism was significantly more evident among the Japanese students (Heine et al., 2000).

Similar results were obtained in three additional studies comparing self-ratings and questionnaire responses in collectivist versus individualist cultures. The participants in these instances were Japanese college students compared with American college students, and Chinese high school and college students in Singapore compared with Jewish high school and college students in Israel. The results from both studies showed that those from collectivist cultures (Japan and China) showed significantly greater self-criticism and significantly lower self-enhancement than those from individualist cultures (the United States and Israel) (Heine & Renshaw, 2002; Kurman, 2001). A study comparing people in the United States, Mexico, Venezuela, and China found that the Chinese demonstrated the strongest tendency toward self-effacement compared to those in the other cultures (Church et al., 2014). These patterns have been replicated using different measures, including ERP on EEG, behavior, and self-report: Americans self-enhanced on every measure, whereas Chinese students did not. Instead, the Chinese engaged in other-enhancement across measures (Hampton & Varnum, 2018). EEG stands for electroencephalogram, which measures electrical activity in the brain using small metal electrodes placed on the head. The brain activity measured is called the event-related potential (ERP). Other research looking at brain activity in a different region with EEG showed that European American college students evinced more

attentional arousal when their name was primed with positive, not negative, situations compared to Asian American college students (Chen et al., 2020).

Nordic cultures such as Norway, Sweden, and Denmark provide another example of cultures encouraging self-effacement. The cultural concept of *Janteloven* enjoins people not to place their own interests above those of their community and to show humility. A comparison of college students in the United States and Norway found that the Americans rated themselves significantly higher than average on positive personality traits and lower than average on negative traits compared to the Norwegian students (Silvera & Seger, 2004).

Self-enhancement strategies may work in shaping how others perceive you, but maybe only within a Western context where such behaviors are more common and in the short run. Research in various countries in Europe found that self-enhancers were rated by others as being emotionally stable, socially attractive, and socially influential (Dufner et al., 2013). There is strong evidence that self-enhancement supports positive personal adjustment (more life satisfaction, positive affect, and less negative affect, depression) in a review of almost 300 samples of 126,916 participants across cultures (Dufner et al., 2019). However, that same review found that self-enhancement tendencies undermined some aspects of interpersonal adjustment (social relationship health) over time. Thus, self-enhancement may be good for the individual but not for broader social relationships and the group. We also must remember that self-enhancement tendencies will lead to positive reporting about one's traits, and this has implications for how well we can measure personality.

Child-Rearing Practices

The impact on behavior and personality of cultural differences in child-rearing practices is also substantial. In the individualist culture of the United States, parents tend to be more noncoercive, democratic, and permissive in their child-rearing techniques. In collectivist cultures, parental practices tend to be more authoritarian, restrictive, and controlling.

Chinese mothers living in Canada were found to be more authoritarian in raising their children than non-Chinese mothers in Canada (Liu & Guo, 2010). Turkish mothers living in Germany who were more assimilated into the German culture emphasized individualist goals for their children much more than Turkish mothers who were not so assimilated (Durgel et al., 2009). Although across cultures there may be average differences in parenting style, the way parents approach caring for and teaching their children shapes children's traits in consistent ways. That is to say, particular parenting strategies and styles are likely to lead to certain attributes in children regardless of the culture. For example, in a study of almost 13,000 adolescents across 10 cultures (China, Czech Republic, Hungary, the Netherlands, Slovenia, Spain, Switzerland, Taiwan, Turkey, and the United States), parents' closeness and support were associated with fewer internalizing (e.g., anxiety, depression) and externalizing (e.g., antisocial behavior, aggression) problems in their children, and the more conflict parents engaged in, the more of these problems their children had (Vazsonyi et al., 2022).

Parents' own personalities also shape their parenting style, which then shapes children's traits (Krupić et al., 2020): More neurotic parents engaged in more authoritarian parenting, and agreeable parents engaged in less authoritarian parenting, which was associated with more psychopathic traits in children. One important question to consider, though, is to what extent parenting is shaping children's personality, or to what extent the parents' personality both causes the parents' behavior and was inherited by the children. This is a topic we will discuss in thinking about the behavioral genetics of personality.

A Diversity of Cultures

As we have just learned, there have been major advances in exploring a wide range of cultural differences in personality research in recent years. However, it still remains true that much less research has been conducted on personality in African and South American nations than in English-speaking countries or in many of the countries of Europe and Asia. Also, much of the research that has been conducted among those understudied populations has not been made widely available in English-language sources.

Another problem limiting the applicability of cross-cultural personality research is that the majority of studies in personality rely on American college students as participants. One of the goals of this book is to cover research results from a more diverse and representative selection of people. The studies you will learn about here are from more than 40 different countries, all of which are listed on the inside back cover, and from a variety of age groups, cultures, religions, and ethnic backgrounds. We will not be dealing only with the personalities of White American college students.

Pause for Reflection

How do you think your cultural experiences have molded your personality?

Measuring and Assessing Your Personality

To measure something means to systematically collect data on the construct of interest; to assess something means to evaluate it. Assessing something requires measurement of it. Measurement tools are necessary for psychology researchers to assess individuals' or groups' personality traits to understand how those traits relate to each other, behaviors, different contexts, and genes or how they change over time. Assessments make it possible to study the motivations, emotions, thinking patterns, and behaviors into which personalities feed or of which they're composed.

The assessment of personality is also a major area of application of psychology to a number of real-world concerns. For example, clinical psychologists try to understand the symptoms of their patients or clients by assessing their personalities and by differentiating between normal and abnormal behaviors and feelings. Only by evaluating personality in this way can clinicians diagnose disorders and determine the best course of therapy.

School psychologists evaluate the personalities of the students referred to them for treatment in an attempt to uncover the causes of adjustment or learning problems. Industrial/organizational psychologists assess personality to select the best candidate for a particular job. Counseling psychologists measure personality to help guide their clients' coping strategies with every day life.

Understanding personality assessments will be key to understanding your own personality, what exactly is meant by personality, and conclusions that can be drawn from personality research.

The Concepts of Reliability and Validity

The best techniques of personality measurement and assessment adhere to the principles of **reliability** and **validity**.

Reliability Reliability involves the consistency of responding to a measure or assessment. Suppose you responded to the same measure on two different days and received two widely different results. How would you know which result is the most accurate one? A measure like that would not be considered reliable because its results were so inconsistent. No one could depend on that test for an adequate assessment of your personality. It is common to find some slight variation in results when a measure is completed multiple times, but if the variation is large, then something is wrong with the measure or with the method of scoring it. For example, a brief personality measure called the TIPI (Ten-Item Personality Inventory, Gosling et al., 2003) asks you to rate to what extent you agree (on a scale from 1 = strongly disagree to 7 = strongly agree) that attributes like *extraverted, enthusiastic* and *reserved, quiet* (reversed) describe you. Then those two scores are used to compute an *extraversion* score that ranges from 1 *low extraversion / high introversion* to 7 *low introversion / high extraversion*. If you got a 6 the first time and a 2 the second time, the measure would lack reliability. But this measure is actually pretty reliable.

Validity Validity refers to whether a measure or assessment captures what it is intended to capture. Does an intelligence test truly measure intelligence? Does a test of anxiety actually evaluate anxiety? If a measure does not measure what it claims to, then it is not valid, and its results cannot be used to understand the trait, to assess how it relates to other traits, or to predict behavior. For example, your score on an invalid intelligence test, no matter how high, will be useless for predicting how well you will do in college or in any other situation that requires a high level of intelligence. A personality test that is not valid may provide a misleading portrait of your cognitive, emotional, and behavioral tendencies and will be of no value to you or a potential employer. If instead of *extraverted, enthusiastic* and *reserved, quiet,* the TIPI used words like *angry, aggressive* or *fatigued, inattentive* to capture extraversion, the measure would not be considered valid on its face (*face validity*). If the score did not match up with other valid measures of extroversion or related constructs (e.g., social engagement, talkativeness), it would lack *convergent validity*. Refer to Figure 1.2.

Methods of Assessment The personality theorists discussed in this book devised different measures and methods for assessing personality that were the most useful for their theories and that innovated or built on methods of their time. By applying these methods, they obtained the data on which they based their formulations. Their techniques vary in objectivity

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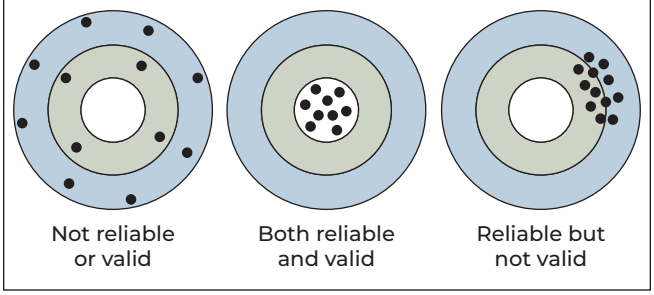
reliability The consistency of response to a psychological measure or assessment.

validity The extent to which a measure or assessment captures what it is intended to capture.

Figure 1.2

Personality measures can be reliable and/or valid



Source: https://pierzgal.github.io/STAT101.en/reliability-and-validity.html

and subjectivity, reliability, and validity, and can collect quantitative or qualitative data. We will discuss some common forms of personality measures:

- Self-report measures
- Projective techniques
- Clinical interviews
- Behavioral observations
- Experience sampling

In personality psychology, an **objective** measure is impartial and has a standardized quantifiable outcome that allows for direct comparison across results, whereas a **subjective** measure is not impartial and does not have a standardized quantifiable outcome that allows for direct comparison across results. For example, checking certain behaviors off a standardized list of ongoing behaviors during a one-hour observation period in a controlled setting is an objective measure of extraversion, but estimating participants' extraversion from how they feel when they look at an inkblot that might look like two people is a subjective measure.

objective Measures that are impartial and have standardized quantifiable outcomes that allow for direct comparison across results.

subjective Measures that are not impartial and do not have standardized quantifiable outcomes that allow for direct comparison across results.

quantitative Methods that collect data in the form of numbers that can be compared and analyzed via statistical analyses.

qualitative Measures that gather data usually in the form of words and descriptions that can be coded for content, themes, and styles of thinking.

self-report measure A personality assessment technique in which respondents answer questions about themselves.

In the checklist example, participants either engage in the behaviors or not, and the behaviors can be added up to provide a count of extraverted behaviors. In contrast, the responses to the inkblot are open to interpretation of both the participant and the person interpreting the results.

Both quantitative and qualitative methods are useful. **Quantitative** methods collect data in the form of numbers that can be compared and analyzed via statistical analyses. The TIPI and Minnesota Multiphasic Personality Inventory (MMPI), for example, ask respondents to rate their agreement with certain statements, and the rating will be in the form of a number (1 to 7). **Qualitative** measures gather data usually in the form of words and descriptions that can be coded for content, themes, and styles of thinking. For example, researchers interested in understanding how extraversion affects moral behavior might measure extraversion and then ask people to write a response to the prompt, "How do your friendships help or hinder your behaving in accordance with your morals?" In this way, qualitative data are often more subjective in that response options are not held constant and individuals can express their own thoughts and feelings in idiosyncratic ways. There are systematic ways to analyze both types of data.

Self-Report Personality Measures

The **self-report measure** approach involves asking people to report on themselves by answering questions about themselves, including motivations, thoughts, feelings, and behaviors in general or across various situations. These measures can capture a variety of constructs and can deal with symptoms, attitudes, interests, fears, and values via quantitative data. Respondents can indicate how closely each statement describes themselves or how much they agree with each item. There are a number of self-report personality tests in use today as we will discuss in later chapters.

Minnesota Multiphasic Personality Inventory (MMPI)

The MMPI has been translated into more than 140 languages and is the world's most widely used psychological test (see Butcher, 2010; Cox et al., 2009). First published in 1943, the MMPI was revised in 1989 to make the language more contemporary and nonsexist. The MMPI-2 has over 550 true–false statements, and the most updated version, the MMPI-3, has 335 statements (Ben-Porath & Tellegen, 2020).

The test items cover physical and psychological health; political and social attitudes; educational, occupational, family, and marital factors; and neurotic

and psychotic behavioral tendencies. The test's clinical scales measure such personality characteristics as gender role, defensiveness, depression, hysteria, paranoia, hypochondriasis, and schizophrenia. Some items can be scored to determine if the test-taker is deliberately faking or careless, or whether they misunderstood the instructions. Examples of the types of statements in the MMPI are shown in Table 1.2.

The MMPI is used with adults in research on personality as a diagnostic tool for assessing personality problems, for employee selection, and for vocational and personal counseling. In 1992, the MMPI-A was developed for use with adolescents. The number of questions was decreased from 567 to 478 to reduce the time and effort needed to administer it.

One issue with the MMPI is the length. It takes a lot of time to respond attentively to at least 300 to 500 items. Some people lose interest and motivation long before they finish. Also, some of the items on this and other self-report personality measures deal with highly personal characteristics, which some people consider an invasion of privacy and to which they may respond dishonestly. Nevertheless, despite the length and privacy issues, the MMPI in its various forms is a reliable and valid measure that can be used to discern people's personality, mental health, and behavioral tendencies. Thus, it remains a highly valuable diagnostic and research tool. On the other extreme is the TIPI, which has only 10 items and is limited to the Big Five personality traits—extraversion, neuroticism, conscientiousness, agreeableness, and openness to experience. Although this measure is limited in the depth and breadth of its measurement of the Big Five personality traits, it is easy to administer and can be used when assessors or researchers do not have the time or space in a questionnaire to ask more questions.

Limitations of Self-Report Measures

Although self-report measures are easy to administer and can assess many facets of personality, they have some limitations. For example, the measures are not appropriate for everyone, including people with limited reading skills such as children. Furthermore, even minor changes in the wording of the questions or the response alternatives on can lead to major changes in the results.

There is also the tendency for test-takers to give answers that appear to be more socially desirable or acceptable, particularly when they are responding as part of a job application or when concerned about an authority figure or peer accessing the results. Suppose you were applying for a job you really wanted and were asked whether you agree with this statement: "I am often very tense on the job." Would you answer "yes" to that question?

When a group of college students took a self-report test with instructions to make themselves appear as good, or as socially acceptable, as possible, they were more careful with their answers and took longer to complete the test than students who were not deliberately trying to look good (Holtgraves, 2004). Similar results have been shown with other self-report inventories. Most subjects find it easy to give false answers when asked to do so in research studies (McDaniel et al., 2009).

Table 1.2 Sample items from the Minnesota Multiphasic Personality Inventory (MMPI)

Answer "true" or "false."
At times I get strong cramps in my intestines.
I am often very tense on the job.
Sometimes there is a feeling like something is pressing in on my head.
I wish I could do over some of the things I have done.
I used to like to do the dances in gym class.
It distresses me that people have the wrong ideas about me.
The things that run through my head sometimes are horrible.
There are those out there who want to get me.
Sometimes I think so fast I can't keep up.
I give up too easily when discussing things with others.

Despite these problems, self-report measures remain one of the best ways to assess personality. Even with social desirability biases, consider that individuals have the most information about their own thoughts, feelings, motivations, and behaviors—the very information personality measures aim to capture. Self-report measures can also easily be administered online, which is less expensive and time intensive. No significant differences in responses to most self-report inventories have been found between paper-and-pencil tests and the same tests administered online (e.g., Chuah et al., 2006; Clough, 2009; Luce et al., 2007; Naus et al., 2009).

Projective Techniques

Inspired by Sigmund Freud's emphasis on the importance of the unconscious, clinical psychologists developed **projective tests** that attempt to probe the more hidden portions of our personality and provide qualitative data. The theory underlying projective techniques is that when we are presented with an ambiguous stimulus, like an inkblot or a picture that can be interpreted in more than one way, we will project our innermost needs, fears, and values onto the stimulus when we're asked to describe it.

Because the interpretation of the results of projective tests is so subjective, these tests are not high in reliability or validity. It is not unusual for different people giving the test to form quite different impressions of the same person based on the results of a projective test. In such a case, the inter-scorer reliability of the test is low. Nevertheless, these tests are widely used for assessment and diagnostic purposes. Two popular projective tests are the Rorschach Inkblot Technique and the Thematic Apperception Test (TAT).

Rorschach and His Inkblots

The Rorschach (pronounced "ROAR-shack") was developed in 1921 by the Swiss psychiatrist Hermann Rorschach (1884–1922), who had been fascinated by inkblots since childhood. As a youngster, he had played a popular game called *Klecksographie*, or *Blotto*, in which children gave their interpretations of various inkblot designs. Rorschach was known to be so intensely interested in inkblots that as a teenager he acquired the nickname *Klecks*, which in German means "blot of ink." Later, when Rorschach was serving a hospital residency in psychiatry after receiving his MD, he and a friend played Blotto with patients to pass the time. Rorschach noticed consistent differences between the responses of patients and the responses offered by school children to the same inkblots.

Figure 1.3

An inkblot similar to a Rorschach inkblot.

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In developing his test, Rorschach created his own inkblots simply by dropping blobs of ink on blank paper and folding the paper in half (see Figure 1.3). After trying a variety of patterns, he settled on 10 blots for the practical reason that he could not afford to have more than 10 printed. He wrote about his work with inkblots, but the publication was not successful. Few copies were sold, and the few reviews it received were negative. Although the test eventually became immensely popular, Rorschach became depressed and died of what is believed to be a ruptured appendix nine months after his work was published.

Using the Rorschach

The inkblot cards (some black, others in color) are shown one at a time, and respondents are asked to describe what they see. Then the cards are shown a second time, and the psychologist asks specific questions about the earlier answers. The examiner observes how the person responds during the testing session, including the respondent's gestures, emotional reactions to particular inkblots, and how they give their answers.

Responses can be interpreted in several ways, depending on whether the respondent reports seeing

projective test A type of personality measure that gives respondents the opportunity to project personal needs, fears, and values onto their interpretation or description of an ambiguous stimulus.

movement, human or animal figures, animate or inanimate objects, and partial or whole figures. Attempts have been made to standardize the administration, scoring, and interpretation of the Rorschach. The most successful of these, the Comprehensive System, claims, on the basis of considerable research, to lead to improved reliability and validity (see Exner, 1993).

There is no universal agreement about the Rorschach's usefulness and validity, even with the Comprehensive System for scoring. Some researchers have concluded that there is no scientific basis for the Rorschach; others insist that the test is as valid as any other personality assessment measure. Nevertheless, the Rorschach continues to be a popular assessment technique in personality research and clinical practice.

Thematic Apperception Test (TAT) Henry Murray and Christiana Morgan developed the TAT (Morgan & Murray, 1935). The test consists of 19 ambiguous pictures, showing one or more persons, and one blank card. The pictures are vague about the events depicted and can be interpreted in different ways. People taking the test are asked to tell a story about the people and objects in the picture, describing what led up to the situation shown, what the people are thinking and feeling, and what the outcome is likely to be. In clinical work, psychologists consider several factors in interpreting these stories, including the kinds of personal relationships involved, the motivations of the characters, and the degree of contact with reality shown by the characters.

There are no objective scoring systems for the TAT, and its reliability and validity are low when used for diagnostic purposes. However, the TAT has proven useful for research purposes, and scoring systems have been devised to measure specific aspects of personality, such as the needs for achievement, affiliation, and power. It also continues to be useful in clinical practice, perhaps because people reveal more about themselves because of the indirect nature of the measure (Gieser & Wyatt-Gieser, 2013).

Other Projective Techniques Word association and sentence completion tests are additional projective techniques that psychologists use to assess personality. In the word-association test, a list of words is read one at a time to the respondent who is asked to respond to each with the first word that comes to mind. Response words are analyzed to understand thoughts, emotions, motivations, fears, and goals. Speed of response is considered important. Interpretation of the responses can be highly subjective. Some sentence-completion tests, such as the Rotter Incomplete Sentence Blank (RISB) developed by Julian Rotter in 1950, have more objecting coding schemes. Subjects are asked to finish such sentences as "My ambition is . . ." or "What worries me is . . . ," and responses can be analyzed.

Clinical Interviews

In addition to specific psychological tests used to measure an individual's personality, assessment often includes clinical interviews, which provide qualitative data. After all, it is reasonable to assume that valuable information can be obtained by talking to the person being evaluated and asking relevant questions about past and present life experiences, social and family relationships, and, in the case of a clinical context, the problems that led the person to seek psychological help. A wide range of behaviors, feelings, and thoughts can be investigated in the interview, including general presentation, demeanor, and attitude; facial expressions, posture, and gestures; preoccupations; degree of self-insight; and level of contact with reality.

Armed with the results of psychological tests like the MMPI, which are usually administered before or during a series of interview sessions, the psychologist can focus on problems indicated by the measure results and explore those areas in detail. Interpretation of interview material is subjective and can be affected by the interviewer's theoretical orientation, goals, and personality. Nevertheless, clinical interviews remain a widely used technique for personality assessment and a useful tool when supplemented by more objective procedures.

Behavioral Assessment

In the behavioral assessment approach, a thoroughly trained observer evaluates a person's behavior in a given situation. Depending on the measure the

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Behavioral assessment can occur in controlled settings, out in the world, at home, or in school contexts.

observer is using, these can provide quantitative and/or qualitative data. The better the observers know the people being assessed and the more frequently they interact with them, the more accurate their evaluations are likely to be (Connelly & Ones, 2010). Psychologists Arnold Buss and Robert Plomin developed a questionnaire to assess the degree of various temperaments (i.e., early-in-development personality) present in twin pairs (Buss & Plomin, 1984). The mothers of the twins were asked, on the basis of their observations of their children, to check those items on the questionnaire that best described specific and easily discernible instances of their children's behavior. Sample items from the questionnaire are listed in Table 1.3.

Behavioral assessments are routinely part of clinical interviews or clinicians' assessment approaches more generally. Clinicians observe their clients' behavior—considering, for example, facial expressions, nervous gestures, and general presentation—and use that information in formulating their diagnoses. Such observations are less systematic than formal behavioral assessment procedures, but the results can provide valuable insights.

Experience Sampling

In the behavioral approach to personality assessment, we discussed how specific behavioral actions are monitored by trained observers. In the experience-sampling approach to assessment, people record their experiences—thoughts, feelings, behaviors and the social environment and context—at certain time intervals to provide a sample over a period of time, usually via a smartphone. In this procedure, then, the observer and the person being observed are the same. Depending on the measure the person responds to, this method can provide quantitative and/or qualitative data. This allows for clinicians or research psychologists to analyze how thoughts, feelings, and behaviors change over time or by environment or social situation.

An example of the experience sampling approach to personality assessment involved a group of college students who kept daily diaries online for 28 days. Each entry described their moods as well as stressful events and how they coped with them. It may not surprise you to learn that the primary type of negative event involved academic issues. The second most reported type of negative issue dealt with interpersonal issues—getting along with others (Park et al., 2004). Other approaches to personality assessment might not have uncovered this information so easily.

An experience sampling study of Japanese students found that those who reported having repetitive thoughts at night and obsessing about something in their lives had problems going to sleep and slept fitfully and for not as long as compared to students who did not report having repetitive thoughts (Takano et al., 2014).

A possible limitation of the experience sampling approach is that respondents might be so busy doing other things that they forget to record their activities when signaled to do so. As a result, the useful data might be restricted only to the most attentive and conscientious research participants. It is also possible that emotions or moods—such as anger or sadness—affect the nature of the information reported (Scollon et al., 2009). Overall, however, the method is useful to researchers and provides data comparable to those from self-report inventories.

Table 1.3 Sample items from the Buss and Plomin EASI Temperament Survey

Child tends to cry easily.
Child has a quick temper.
Child cannot sit still long.
Child makes friends easily.
Child tends to be shy.
Child goes from toy to toy quickly.

Diversity Considerations in Personality Measurement and Personality Differences

There are many things to consider when deciding whether and to what extent conducting research on personality across different cultures and with individuals that vary in gender, race, and ethnicity can be done validly and reliably with particular measures. Some measures can effectively be translated and implemented in other languages or contexts than the ones in which they were developed, but others face challenges relating to cultural norms. Relatedly, it is paramount to be thoughtful about *why* certain group differences in personality emerge—is it because there is an innate difference due to the different challenges faced by different groups over time, or is it because of the culture or stereotypes to which individuals were exposed? We will explore several important factors to consider.

Culture, Race, and Ethnicity

Hermann Rorschach was one of the first to recognize the effects of cultural differences in responding to personality assessment techniques. In 1921, he found differences in responses to his inkblot test from people living in two culturally distinct areas of Switzerland. He wrote that such responses "should be very different in various people and races" (quoted in Allen & Dana, 2004, p. 192). In line with that idea, the TAT cannot be used in Islamic cultures, because of the Muslim prohibition against representing humans in pictorial form. When groups of European women and Muslim women were asked to make up stories in response to the TAT pictures, the European women did so readily and easily, whereas the Muslim women hesitated. The researcher noted that the Muslim women "consistently refused to give coherent interpretations. They refused to invent or fictionalize [the pictures]" (Bullard, 2005, p. 235).

Much research work has been done to understand whether the MMPI can be implemented to effectively measure personality and clinical symptomatology across different gender, racial, and ethnic groups and across cultures. A study of Native Americans using the MMPI-2 demonstrated how responses to test questions reflected behavior that was considered normal in that culture but pathological in the majority White culture (Hill et al., 2010). Other research reinforces this idea that what is normal in one culture may be judged as abnormal in other cultures (Cheung, 2009).

Although some personality tests have been translated for use in other cultures, there are potential problems with their cross-cultural application (see, for example, Gudmundsson, 2009). This is particularly crucial when a test designed for the population of a Western culture is administered to people in a non-Western culture. For example, among traditional Chinese people, important personality characteristics include being gracious, having a family orientation, emphasizing harmony with others, and showing frugality in everyday behavior. None of these factors is typical of those measured by American personality inventories. There are also cultural differences in acknowledging or seeking out help for negative emotional traits and experiences. Some Asian languages, such as Korean, do not even have a specific word for depression. Research consistently shows that Asian Americans, particularly first-generation immigrants, underutilize mental health treatment services. Those born in the United States are almost twice as likely to seek treatment as those born outside the United States (Meyer et al., 2009). First-generation Chinese students in the United States were found to be significantly less likely to seek treatment for emotional distress than first-generation European students in the United States (Hsu & Alden, 2008). Asian Americans also tend to wait until the distress is severe before seeking help and less likely to benefit from it (Hwang, 2006).

Similar patterns emerge in Latina/o and Hispanic communities. Among Latina/os who do seek counseling, half never follow up on their first visit by returning for additional sessions (Dingfelder, 2005). A study of adolescents found that significantly more non-Hispanic White people received adequate mental health care than Latina/o people (Alexandre et al., 2009). Foreign-born Hispanic people are even less likely to use mental health services than Hispanic people born in the United States (Bridges et al., 2010).

Hispanic adolescents who do seek mental health treatment are typically treated by clinicians for shorter periods of time than non-Hispanic White adolescents (Edman et al., 2010). However, a study of Mexican American college students found that as they became more integrated in the mainstream U.S. culture, their attitudes toward counseling became more favorable (Ramos-Sanchez & Atkinson, 2009). One confounding factor is the shortage of Spanish-speaking clinical psychologists and other mental health personnel. Thus, personality research and assessment based on clinical populations may be biased because of differences in who is more willing to engage clinical services or participate in research.

Even with those challenges, the MMPI appears to perform well across diverse groups and cultures (e.g., Wood et al., 2002). In a study of the MMPI clinical scale of Antisocial Behavior in American and Korean clinical adult samples, researchers found that the submeasures of School Problems, Family Problems, and Violation of Social Norms performed similarly in the two samples; however, there were some differences on Substance Abuse, which may be based on translation issues (Wang et al., 2021). Other differences emerge at the intersection of culture, race, and gender. For example, on the MMPI-2, Asian American women scored higher than White American women on Infrequency (tendency to experience bizarre sensations and thoughts), Lie (tendency to report traits or symptoms in socially desirable ways), Depression, Schizophrenia, and Social Introversion (Rosik et al., 2017). Asian American men scored lower than White American men in Correction (tendency to report traits or symptoms in defensive ways) and Hypochondria (preoccupation with health and tendency to exaggerate physical

symptoms), but higher in Social Introversion. These differences may reflect real group differences given what has been differentially adaptive for the groups over time, cultural norms, or different responding styles—or, more likely, some combination.

When the MMPI-2 was first translated into Arabic, the issue arose of how to treat questions about one's sex life. In Arab countries, any open discussion of sex is considered inappropriate, even offensive. The researchers decided to retain the sex questions in the test but to specify in the instructions that the subjects' responses to these items were optional. A study of college students in Iran showed that more than 90 percent chose not to respond to items relating to sex (Nezami et al., 2008).

Even the way people in the United States design and respond to test questions may differ from other cultures. Responding to items in a true–false format or multiple-choice format seems natural to American college students, who have been taking these types of tests since childhood. To others, it may be a strange way of answering questions. When the MMPI was first introduced in Israel in the 1970s, many people there found it difficult to respond because they were unfamiliar with the true–false answer format. The test instructions had to be rewritten to explain to the respondents how they were supposed to record their answers (Butcher, 2004). However, since then, scales from the MMPI-2 have been translated and adapted in Hebrew, for example (Shkalim et al., 2016).

Race and ethnicity are important factors that shape personality, especially when considering the different cultural experiences of people from minoritized groups. For the most part, there are few personality differences among racial and ethnic groups—humans tend to be more similar than different across the board. For example, in a study of psychiatric patients, both Black and White people, who were hospitalized at a Veterans Administration (VA) center, no significant differences were found on any of the MMPI's scales (Arbisi et al., 2002). Likewise, studies show that scores obtained on the MMPI by people of Hispanic origin are similar to those obtained by non-Hispanic White people (see, for example, Handel & Ben-Porath, 2000).

However, Black and White college students were found to differ on a measure of paranoia. Black students scored significantly higher on items measuring a lack of trust in other people, a suspicion of their motives, and a tendency to be on guard with others (Combs et al., 2002). Similar results, showing a higher level of distrust and paranoid personality patterns, were shown in research with older Black subjects

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Good personality measurement and research aims to understand how diversity and context play a role in personality.

between the ages of 55 and 64 (Iacovino et al., 2014). Do these consistent findings mean that Black people tend to be more paranoid than White people? No. We must evaluate and interpret these and similar findings within the appropriate context. Thus, the researchers noted that "the group differences may reflect mistrust or interpersonal wariness caused by pervasive discrimination and perceived racism" (Combs et al., 2002, p. 6). The same conclusion was reached in the 2014 study. Indeed, Black teenagers who scored high in perceived discrimination reported greater depression and lower self-esteem and life satisfaction than teens who scored low in perceived discrimination against them (Seaton et al., 2010).

The extent to which minoritized people are connected to their group and culture can modulate their personalities, emotions, thoughts, and experiences. For example, research found that Black college students who identified strongly with Black cultural values had lower levels of depression and hopelessness than those without a strong cultural identification (Walker et al., 2010). Hispanic and Latina/o Americans tend to be more satisfied with mental health personnel who understand their culture, which typically is highly collectivist in nature and thus more group-oriented than individual-oriented (e.g., Malloy et al., 2004).

Gender

We also know that boys and girls are usually reared according to traditional gender stereotypes, and this upbringing also influences personality in different ways. Research has documented some differences and many similarities between men and women on specific personality factors. For example, considerable data from personality tests, clinical interviews, and other assessment measures indicate differential

rates of negative emotionality and emotion disorders by gender. Women are more often diagnosed with depression, anxiety, and related disorders than are men. One large-scale study of the intensity of emotional awareness and expression compared men and women in college at two American universities and at medical schools in the United States and in Germany. The results showed that women from both countries displayed greater emotional complexity and intensity than did men (Barrett et al., 2000). In a Swedish sample of 2,500 adults, men and women displayed similar levels of psychopathic personality, but women scored higher than men in emotional difficulties and relational aggression (Colins et al., 2017). So the same personality trait may also manifest differently across genders on average. A study of more than 7,000 college students in 16 Islamic nations found that women measured significantly higher in anxiety than men did in 11 of the 16 samples studied (Alansari, 2006), but this may depend on women's roles in those cultures. Gender differences in negative emotionality emerge early in development: a study of 474 children, median age 11, reported that girls showed a higher level of depression and a greater concern with what other people thought of them than boys did (Rudolph & Conley, 2005). Several explanations have been offered. There actually may be a higher incidence of these disorders among women, or the differential rate may be related to gender bias or gender stereotyping in interpreting the assessment results.

In a review of gender differences across diverse samples in the Big Five personality traits, we observe sizable differences with men being less agreeable and neurotic than women, and smaller differences with men being less conscientious and extraverted, with no difference in openness to experience (Del Giudice, 2015). Compared to women, men also tend to score higher in dominance and lower in nurturance, two factors of the Interpersonal Circumplex Model. For children (from 3 months to 13 years old), girls tend to score higher on self-control and boys tend to score higher in activity and sociability. There is not an apparent difference in children's negative feelings by gender. This vast review also showed the interaction between culture and gender: in individualist cultures, boys and girls and men and women tend to be more different in their personality compared to in collectivist societies. Notably, individualist versus collectivist cultures also tend to be more gender egalitarian or equal.

Of course, that there are gender differences does not suggest that they are all innate; gender differences are affected by both biology and environmental inputs, such as parenting, education, and cultural norms. We will consider examples throughout the book of gender and sex differences in personality.

The reworking of personality tests to ensure that they accurately reflect and measure relevant personality variables is difficult and requires knowledge of and sensitivity to cultural differences and reasons why groups might differ that do not reflect real personality differences.

Pause for Reflection

Why is it important to consider cultural context in understanding personality measurement and differences? How might your position in society shape your responses to personality measures?

Research in the Study of Personality

Psychologists conduct research on personality in different ways. The method used depends on which aspect of personality is under investigation. Some psychologists are interested only in overt behavior—what we do and say in response to certain stimuli. Other psychologists are concerned with feelings and conscious experiences as measured by tests and questionnaires. For them, self-report measures are among the most frequently used research techniques. Still other investigators try to understand the unconscious forces that may motivate us. A method useful for examining one aspect of personality may be inappropriate for another aspect.

In accordance with the scientific method, these strategies are employed to collect data that can be analyzed to test a hypothesis (an empirically testable proposition about some fact, association, or behavior) that is inspired by a theory (principle[s] that explain or predict a number of interrelated phenomena; a scientific explanation). Once the results are analyzed and compared to the hypothesized pattern, the hypothesis and theory can be updated in accordance with the results of the data analysis and tested again.

The major methods used in personality research are the clinical method, the experimental method, and the correlational method. Although different in their specifics, these methods depend in varying degrees on objective observation, which is the fundamental defining characteristic of scientific research in any discipline. As we discuss in the following sections, these methods can be used in person or online.

The Clinical Method

The primary clinical method is the **case study** or case history, in which psychologists probe their patients' past and present lives for clues to the source of their emotional distress or mental health challenges. Undertaking a case study is similar to writing a mini-biography of a person's psychological life from the early years to the present day, including feelings, thoughts, fears, goals, and experiences, captured via qualitative data.

Freud used case studies extensively in developing his theory of psychoanalysis, as we will discuss in Chapter 2. He probed into his patients' childhood years, looking for those events and conflicts that may have caused their present neuroses. One such patient was Katharina, an 18-year-old woman suffering from anxiety attacks and shortness of breath. In reconstructing what he considered to be the relevant experiences in her childhood, Freud traced Katharina's symptoms to several early experiences of sexual abuse. With another patient, Lucy, Freud linked her reported hallucinations to events in her past that related to her love for her employer that had been rebuffed.

It was through such case studies that Freud developed his theory of personality, with its focus on sexual conflicts or traumas as causal factors in neurotic behavior. Freud and later theorists who used the case study method searched for consistencies and patterns in their patients' lives. On the basis of what they perceived as similarities among the reports of their patients, these theorists generalized their findings to everyone.

Psychologists also use a variety of other clinical methods in addition to case studies, including standardized clinical measures, interviews, and dream analysis. Although many of the measures used in the clinical method are scientifically rigorous and analyze data from many individuals, reliance on case studies or analysis of one or just a few people's data does not offer the precision and control of the experimental and correlational methods, which tend to rely on much more data that can therefore provide more generalizable conclusions. The data obtained by the clinical methods based on case studies are more subjective, involving mental and largely unconscious events and early life experiences.

Such data are open to different interpretations that may reflect the therapist's own personal biases, more so than data obtained by other methods. Also, memories of childhood events may be distorted by time, and their accuracy cannot easily be verified. However, the clinical method can provide a window through which to view the depths of the personality, and we shall consider many examples of its use, especially by the psychoanalytic and neo-psychoanalytic theorists.

The Experimental Method

An experiment is a research method for determining the effect of one or more variables or events on an outcome. We are constantly exposed to stimuli going on around us in our everyday world—lights, sounds, phone screens, voices, sights, odors, instructions, and trivial conversations. When psychologists want to determine the effect of just one stimulus variable, they arrange an experimental situation in which only that variable is allowed to operate.

All other variables are eliminated or held constant during the experiment. Then, if the response of the participants changes while only that one stimulus variable is in operation, we can be certain that it alone is responsible for the change. The change could not have been caused by another variable because no other variable was allowed to influence the subjects during the experiment.

There are two kinds of variables in an experiment. One is the **independent variable**, or stimulus variable, which is the one manipulated by the experimenter. The other is the **dependent variable**, or outcome variable, which is the participants' response to that manipulation. To be certain that no variable other than the independent variable can affect the results, researchers study two groups of subjects: the experimental group and the control group. Both groups are chosen at random from the same population of participants.

The **experimental group** includes those participants exposed to the experimental condition. This is the group exposed to the stimulus or independent variable.

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case study A detailed history of an individual that contains data from a variety of sources.

independent variable In an experiment, the stimulus variable or condition the experimenter manipulates to learn its effect on the dependent variable.

dependent variable In an experiment, the outcome variable the experimenter measures, typically the participants' behavior or response to manipulation of the independent variable.

experimental group In an experiment, the group that is exposed to the experimental condition.

The **control group** is not exposed to the independent variable or is exposed to a different version that is expected to have a different effect. Measures of the factor being studied are usually taken from both groups before and after the experiment. In this way, researchers can determine if any additional variables might have influenced the participants' response. If some other variable was operating, then both groups would show the same changes in the outcome. But if no other variable was in operation—if the independent variable alone influenced the participants—then only the response of the experimental group would change. The behavior of the control group would remain the same.

Applying the Experimental Method Here's an example of the experimental method in action, using data from Albert Bandura's social-learning theory of personality (see Chapter 13). Bandura wanted to find out if children would imitate the aggressive behavior they saw in adults. He could have observed children on neighborhood streets or at a playground, hoping to catch their reactions if they happened to witness a violent incident. He could then have waited to assess whether the children would imitate the aggressive behavior they had observed.

That approach is obviously unsystematic and uncontrolled. Observing children who just happened to be present on a street corner would not provide an appropriate sample of subjects. Some of the children might already possess a tendency to behave aggressively, regardless of the violent behavior they observed. Therefore, it would be impossible to decide whether their aggressive behavior resulted from witnessing that violent act or from some factor that had been part of their personality long before the observation took place.

Also, observing children at random would not allow the researcher to control the type of aggressive act to which the subjects might be exposed. Children may observe many kinds of aggressive behavior every day—on video games, movies, and television as well as on the streets or in playgrounds. In the experiment Bandura wanted to run, it was necessary that all the children he observed be exposed to the same instance of aggressive behavior. He approached the problem systematically by designing an experiment in which children whose preexperiment levels of aggression had been measured were then exposed to the same display of adult aggression. Children in the control group witnessed nonaggressive adults in the same setting. Both groups of children were watched by trained observers to assess how they would behave.

The results showed that those children who watched the aggressive adult behaved more aggressively, while children in the control group showed no change in aggressiveness. Bandura therefore concluded that aggressiveness can be learned by imitating the aggressive behavior of others.

Pause for Reflection

What is a question about personality you would want to test with an experiment? How would you test it?

Limitations of the Experimental Method

There are situations in which the experimental method cannot be used. Some aspects of behavior and personality cannot be studied under rigorously controlled laboratory conditions because of safety and ethical considerations. For example, psychologists might be better able to treat antisocial personalities if they had data from controlled experiments on different child-rearing techniques to determine what kinds of early experiences might lead to dysfunction in adulthood. Obviously, however, we should not and cannot take groups of children from their parents at birth and expose them to various child-rearing manipulations to observe what happens.

Another difficulty with the experimental method is that the participants' responses might change simply because they know they are being observed. They might behave differently if they thought no one was watching their responses. When people know they are participating in an experiment, they sometimes try to guess its purpose and behave in ways to either please or frustrate the experimenter. This kind of response defeats the purpose of the experiment, because the resulting response (the dependent variable) has been influenced by the participants' attitudes rather than by the experimental treatment. This is quite a different response from what the researcher intended to study.

Experimental research has its limitations, but when it is well controlled and systematic, it provides excellent data. We will discuss examples throughout the book of how the experimental method applies to understanding many aspects of personality.

control group In an experiment, the group that is not exposed to the experimental condition or is exposed to a different version that is expected to have different effects.

The Correlational Method

In the **correlational method**, researchers investigate the relationships that exist among variables. Rather than manipulating an independent variable, the experimenters measure the variable. For example, instead of experimentally creating stressful situations for participants in the psychology lab and observing the effects, researchers can study people who already function in stressful situations—such as police officers, race car drivers, or college students experiencing test anxiety. Or, researchers may measure individuals' stress level and test whether it is correlated with some other variable, such as their personality trait neuroticism or their romantic relationship functioning or their performance in school. That is, in the correlational approach, participants are not assigned to experimental and control groups.

Applying the Correlational Method

Researchers applying the correlational method are interested in the relationship between the variables—in how one variable changes or differs as a function of the other variable. For example, is birth order related to aggressiveness? Do people who score high on an IQ test make better computer scientists than people who score low? Do people with high anxiety use social media to a greater extent than those low in anxiety? The answers to such questions are useful not only in research but also in real-world situations where predictions have to be made about a person's chances of success. The college entrance examinations you took are based on correlational studies that show the relationship between the two variables of standardized test scores and academic success.

Suppose a psychologist wanted to determine whether people high in the need for achievement earn higher grades in college than people low in the need for achievement. Using the correlational method, the psychologist would measure the achievement-need levels of a group of already admitted college students using a self-report measure and compare them with their grades. The independent variable (the different levels of the need for achievement, from high to low) was not manipulated or changed in this case. The researcher collected achievement-need and academic data and found that students high in the need for achievement did earn higher grades than students low in the need for achievement (Atkinson et al., 1976).

We will discuss many examples of the use of the correlational method in personality research throughout the book, especially in discussions of the development of assessment techniques. The reliability and validity of personality measures are typically determined through the correlational method. In addition, many facets of personality have been studied by correlating them with other variables.

The Correlation Coefficient The primary statistical measure of correlation is the correlation coefficient, which provides information about the direction and strength of the relationship between two variables. The direction of the relationship can be positive or negative. The relationship is positive if both variables increase or decrease together. There is a positive relationship between neuroticism and feelings of stress, meaning that people who are high in neuroticism tend to feel high levels of stress, whereas people low in neuroticism tend to feel low levels of stress. The two variables go up and down together. So if high scores on one variable accompany low scores on the other variable, the direction is positive. Also, if low scores on one variable accompany low scores on the other variable, the direction is positive.

In contrast, the relationship is negative if high scores on one variable accompany low scores on the other variable or vice versa. For example, there is a negative relationship between neuroticism and feelings of calm. Refer to Figure 1.4 for graphs of high positive and high negative correlations.

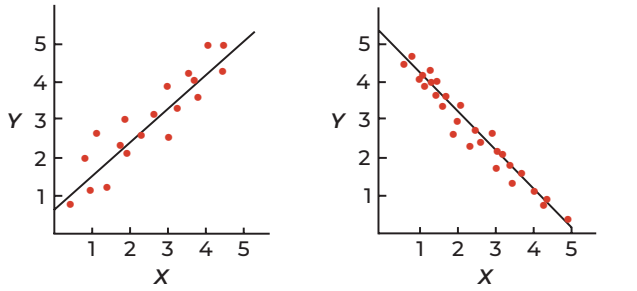
Correlation coefficients range from +1.00 (a perfect positive correlation) to −1.00 (a perfect negative correlation). The closer the correlation coefficient is to +1.00 or −1.00, the stronger the relationship and the more confidently we can make predictions about one variable from the other.

No Cause and Effect The primary limitation of the correlational method relates to the matter of cause and effect. Just because two variables show a high correlation with each other, we cannot conclude that one has caused the other. There may indeed be such a relationship, but researchers cannot automatically conclude that one exists, as they can with a well-controlled, systematic experiment.

correlational method A research design and statistical technique that measures the degree of the relationship between two variables, expressed by the correlation coefficient.

Figure 1.4

Graphs of high positive and high negative correlations.



Suppose a psychologist found a strong negative relationship between the two personality variables of shyness and self-esteem: the higher the level of shyness, the lower the level of self-esteem. Conversely, the lower the level of shyness, the higher the level of self-esteem. The relationship is clear and straightforward: People who are shy tend to score low on measures of self-esteem. We cannot conclude with certainty, however, that being shy causes people to have low self-esteem. It could be the other way around. Maybe low self-esteem causes people to be shy. Or perhaps some other variable, such as physical appearance or parental rejection, could cause both shyness and low self-esteem.

This restriction on drawing conclusions from correlational research presents problems for researchers, whose goal is to identify specific causes. However, for practitioners, whose goal is to predict behavior in the real world, the correlational method is extremely helpful. To be able to predict success in college on the basis of the need for achievement, for example, we need only establish that the two variables have a high correlation.

If a college applicant scores high on a test of the need for achievement, we can predict that the student will earn good grades in college. In this case, we are not concerned with determining whether the level of the achievement need causes good academic performance, only with whether the two variables are related and whether one can be predicted from the other.

Online Research

Psychologists routinely conduct research from many approaches online, including administering psychological tests, taking opinion surveys, and presenting experimental stimuli and recording the participants' responses. They are doing much of the same kinds of research they once could conduct only in person in the laboratory. Now, through crowd-sourcing and other online employment services, they can rapidly and inexpensively collect data from participants for their studies. One highly popular source is Mechanical Turk on Amazon, on which people are paid modest amounts for a variety of services, including participating in psychological surveys and experiments (see Emanuel, 2014; Mason & Suri, 2012; Paolacci & Chandler, 2014). Prolific is a similar online research tool.

Virtual research offers advantages over traditional experimental research. Studies conducted online produce faster responses, are less costly, and have the potential to reach a broader range of people of different ages, levels of education, employment, income, social class, and ethnic origin. Online research can assess a population far more diverse than that found on a typical college campus (Crump et al., 2013).

However, online research also has disadvantages. Web users tend to be younger, more affluent, and better educated than nonusers, thus limiting the chances that an online sample will be truly representative of the population as a whole (though still likely to be more representative than a sample of college students). Those not likely to be represented in online research include older adults, people with lower incomes, people who are visually impaired, or non-English speakers (Buhrmester et al., 2011; Suarez-Balcazar et al., 2009).

People who respond to online research may also differ from nonresponders on important personality characteristics. Research conducted in Germany and in the United States found that people who failed to respond to an online survey were judged, on the basis of their personal websites, to be more introverted and disagreeable, less open to new experiences, and lower in self-esteem than those who did respond to the survey (Marcus & Schutz, 2005).

A study in which American college students were given the choice of participating in psychological research online or in person found that the more extraverted chose to participate in person and the more introverted chose the online method (Witt et al., 2011). Other research found no significant differences between online and telephone survey respondents in their willingness to disclose sensitive personal information. The average response rate for online participants was approximately 10 percent lower than for telephone or mail surveys. Also, some

10 percent of online survey participants were found to engage in excessive clicking and mouse movements when responding (Fan & Yan, 2010; Hines et al., 2010; Stieger & Reips, 2010).

It is difficult to determine how honest and accurate online participants will be when they provide personal information on factors such as age, gender, ethnic origin, education, or income. Nevertheless, a significant number of studies comparing online and traditional laboratory research methods show that the results are, in general, consistent and similar.

The Role of Theory in Personality Theories

Theories are sometimes referred to in dismissive and contemptuous terms. "After all," people may say, "it's just a theory!" It is popular to assume that a theory is something vague, abstract, and speculative—really no more than a hunch or a guess and quite the opposite of a fact. It is true that a theory without research evidence to support it is speculation. However, theories in the scientific field of psychology have a very different connotation; they are essential to organizing and inspiring systematic research to understand personality and human nature. A mass of research data can be meaningless unless and until it is organized into some sort of explanatory framework or context. A theory provides that framework for describing empirical data in a meaningful way. A theory can be considered a kind of map that represents and explains all the data in their interrelationships. It attempts to bring order to the data, to fit them into a meaningful pattern.

Theories are sets of principles used to explain a particular class of phenomena—in our case, the thoughts, feelings, behaviors, and motivations that constitute personality. If personality theories are to be useful, they must be testable, or capable of stimulating research on their various propositions. Researchers must be able to collect data through one or more of the research methods we talked about to determine whether aspects of the theory should be accepted or rejected.

Personality theories must be able to clarify and explain the data of personality by organizing those data into a coherent framework. Theories should also help us understand and predict behavior. Those theories that can be tested and can explain, understand, and predict behavior may then be applied to help people change their behaviors, feelings, and thoughts from harmful to helpful, from undesirable to desirable, in the form of interventions.

The Autobiographical Nature of Personality Theories

We saw that the intent of theories is toward greater objectivity. However, psychologists have long recognized that some personality theories have a subjective component, which may reflect events in the theorist's life as a sort of disguised autobiography. The theorist may draw on these events as a source of data to describe and support the theory. No matter how hard scientists try to be impartial and objective, their personal viewpoint is likely to influence their perception to some degree. This should not surprise us. Personality theorists are human too, as we will discuss, and like most of us, their personalities shape their behaviors, decisions, and interests; they sometimes find it hard to accept ideas that diverge from their own experience.

In order to understand a personality theory fully, we should learn about the life of the person who proposed it. It is important to consider how the development of a theory may have been influenced by specific events in a theorist's life. In cases where sufficient biographical information is available, we will consider examples of how a theory reflects those events. At least initially, the theorists may have been describing or trying to understand themselves. Later in their work, the theorists may have sought appropriate data from other sources to support the generalization of that personal view to others. We observe this in the early history of psychology; but as scientific methodologies become more systematic, theories are tested more rigorously so that personal experiences are less likely to influence focus of studies and interpretation of data.

The significance of personal events in a theorist's life has long been recognized. William James, who is considered by many to have been the greatest American psychologist, believed that biography was a crucial subject for anyone who attempts to study human nature. He argued that it was even more important to understand eminent persons' lives than it was to know their theories or systems if we wanted to learn about the different ways people approach human experience. Freud put it succinctly and clearly when he wrote that his most important patient—the one from whom he learned the most about personality—was himself.

One historian noted that "More than any other professional discipline, psychologists have sought to publish biographical and autobiographical sketches of those in their calling. . . . At some level, at least, they

seem to have acknowledged that their lives and values are the key to their 'scientific knowledge'" (Friedman, 1996, p. 221).

We shall consider many examples of the autobiographical nature of personality theories, but we must also introduce a note of caution into this intriguing relationship between theory and real life. Perhaps it is not only the person's life experiences that influence the development of the theory. Maybe it's the other way around. Perhaps the theory influences what the theorists remember and choose to tell us about their lives. Much of our information about a theorist's life comes from autobiographical recollections. These accounts are usually written late in life, after the person has proposed and defended the theory.

The time spent developing a theory and affirming a public commitment to it may distort the theorist's memories of their earlier years. Does the person recall only those life events that support the theory? Are contradictory or troublesome events conveniently forgotten? Are experiences invented to enhance a theory's credibility? Although we cannot always answer these questions, we should keep them in mind while we explore the notion that personality theories may be at least partly autobiographical.

In the end, it may be a question you will have to answer for yourself, recognizing that perhaps experiences in your own life may influence how you come to understand and judge the lives of others—and their theories of personality.

Pause for Reflection

Think about the most important points in your life. How have these aspects of your life shaped your understanding of personality for yourself and in general?

Questions About Human Nature: What Are We Like?

An important aspect of any personality theory is the image of human nature it represents. Each theorist has a conception of human nature that addresses the basic issues of what it means to be human. For centuries, poets, philosophers, and artists have phrased and rephrased these questions, and we note their attempts at answers in our great books and paintings. Personality theorists, too, have addressed these questions.

The various conceptions of human nature offered by the theorists allow for a meaningful comparison of their views. These ideas are frameworks within which the theorists perceive themselves and other people and then construct their theories. The following text describes the issues that define a theorist's image of human nature. As we discuss each theory, we will consider how the theorist deals with these fundamental issues.

Are We in Charge of Our Lives? Free Will Versus Determinism

A basic question about human nature concerns the age-old controversy between free will and determinism. Theorists on both sides of the issue ask: Can we consciously direct the course of our actions? Can we spontaneously choose the direction of our thoughts and behavior, rationally selecting among alternatives? Do we have a conscious awareness and a measure of self-control? Are we masters of our fate, or are we victims of past experience, biological factors, unconscious forces, or external stimuli—forces over which we have no conscious control? Have external events so shaped our personality that we are incapable of changing our behavior? Some personality theorists take extreme positions on this issue. Others express more moderate views, arguing that some behaviors are determined by past events and some can be spontaneous and under our control.

What Dominates Us? Our Inherited Nature or Our Nurturing Environment?

A second issue has to do with the nature–nurture question. Which is the more important influence on behavior: inherited traits and attributes (our nature or genetic endowment) or features of our environment (the nurturing influences of our upbringing, education, and training)? Do the abilities, temperaments, and predispositions we inherit determine our personality, or are we shaped more strongly by the conditions under which we live? Personality is not the only topic affected by this issue. Controversy also exists about the question of intelligence: Is intelligence affected more by genetic endowment (nature) or by the stimulation provided by home and school settings (nurture)?

As with the free will–determinism issue, the alternatives are not limited to extreme positions. Many theorists assume, and data suggest, that personality is shaped by both sets of forces. To some, inheritance is the predominant influence and environment of minor importance; others hold the opposite view.

Are We Dependent or Independent of Childhood?

A third issue involves the relative importance of our early childhood experiences, compared with events that occur later in life. Which more powerfully shapes personality? If we assume, as some theorists do, that what happens to us in infancy and childhood is most critical to personality formation, then we must consequently believe that our later development is little more than an elaboration of the basic themes laid down in the early years of life. This view is known as **historical determinism**. Our personality (so this line of thought goes) is mostly fixed by the age of 5 or so and is subject to little change over the rest of our life. The adult personality is determined by the nature of these early experiences.

The opposite position considers personality to be more independent of the past, capable of being influenced by events and experiences in the present as well as by our aspirations, hopes, and goals for the future. An intermediate position has also been proposed. We might assume that early experiences shape personality but not rigidly or permanently. Later experiences may act to reinforce or modify early personality patterns.

Is Human Nature Unique or Universal?

Is human nature unique or universal? This is another issue that divides personality theorists. We may think of personality as so individual that each person's thoughts, feelings, motivations, and behaviors have no counterpart or equivalent in any other person. This obviously makes the comparison of one person with another meaningless. Other positions allow for uniqueness but interpret this within overall patterns of behavior accepted as universal, at least within a given culture.

historical determinism The view that personality is basically fixed in the early years of life and subject to little change thereafter.

Our Life Goals: Satisfaction or Growth?

A fifth issue involves what we might call our ultimate and necessary life goals. Theorists differ on what constitutes our major motivation in life. Do we function like machines, like some sort of self-regulating mechanism, content as long as some internal equilibrium or balance is maintained? Do we act solely to satisfy physical needs, to obtain pleasure and avoid pain? Is our happiness totally dependent on keeping stress to a minimum? Some theorists believe that people are little more than tension-reducing, pleasure-seeking animals. Others consider us to be motivated primarily by the need to grow, to realize our full potential, and to reach for ever-higher levels of self-actualization, development, and fulfillment.

Our Outlook: Optimism or Pessimism?

One final issue reflects a theorist's outlook on life—optimism versus pessimism. Are human beings basically good or evil, kind or cruel, compassionate or merciless? Here we are dealing with a question of morality, a value judgment, which supposedly has no place in the objective and dispassionate world of science.

However, several theorists have dealt with the question and, as we shall discuss, it has spawned a vital body of research. Some theorists' views of the human personality are more positive and hopeful, depicting us as humanitarian, altruistic, and socially conscious. Other theorists find few of these qualities in human beings, either individually or collectively.

Our general image of human nature is the lens through which we perceive, assess, judge, and interact with other people. It also represents how we define ourselves. The significance of this is to point out to you that there are many sources of influence on the growth and development of the human personality, and diverse ways of explaining human nature. Perhaps one or more of the explanations we describe in this book will be congenial to you, or perhaps they will clash with your views and your own image of human nature. Few of us can approach this topic without preconceptions because it is, after all, the study of ourselves.

Chapter Summary

Personality can be defined as an enduring, unique cluster of characteristics that may adapt to different situations. Differences in gender, ethnicity, and cultural background can influence personality development and how we respond to measures of personality. Research in cross-cultural psychology shows how personality can vary from one culture or country to the next. Social media, such as Facebook, Instagram, and Twitter, provide opportunities for people to express their personalities but also are used differently based on people's personalities.

Techniques for measuring personality must be reliable (defined as the consistency of responses on a measure across time) and valid (the degree to which the measure gets at what it is intended to).

Self-report measures, in which people report on their own behavior, thoughts, feelings, motivations, and values in various situations, are objective in that scores are not influenced by personal or theoretical biases. Most self-report inventories can be administered online. Projective techniques attempt to probe the unconscious by having people project their thoughts, feelings, motivations, needs, fears, and values into their interpretation of ambiguous figures or situations. Projective techniques are subjective, low in reliability and validity, and usually poorly standardized.

Clinical interviews are used to assess personality, but the interpretation of interview results is subjective. In behavioral assessment, an observer evaluates a person's responses in specific situations. In experience sampling, people record their thoughts, feelings, and behavioral experiences and the context in which they found themselves over a period of time.

People from collectivist societies, such as Asian countries, tend to score lower on factors such as self-enhancement and self-focus and higher on pessimism and negative affectivity compared to people from more individualist societies such as the United States. Translations of personality tests must take into account the nature of other cultures with regard to the questions that may be asked, the translated wording, and the way in which the questions are to be answered. There are few racial, ethnic, and gender differences in average personality traits, but it is important to consider cultural context in understanding why some average traits differ.

Psychological research methods include the clinical, experimental, and correlational approaches. The clinical method relies on case studies, in which psychologists collect and study the details of patients' lives to understand their present thoughts, feelings, motivations, and behaviors. The clinical approach does not satisfy the requirements of psychological research as well as the experimental and correlational methods do. Research requires application of the scientific method, objective measurement, controlled and systematic conditions, and replication and verifiability.

The experimental method is the most precise research method. Using this method, psychologists can determine the effect of a single variable or stimulus on the person's psychology or behavior. The variable referring to the factor to which people are exposed (experimental condition) or not exposed (control condition) is the independent variable; the variable capturing participants' resulting responses is the dependent variable.

In the correlational method, psychologists study the relationship between two variables to determine how one variable changes as a function of the other. The correlation coefficient, the primary statistical measure of correlation, indicates the direction and intensity of the relationship. Online research offers a faster and less expensive alternative as well as access to a broader range of subjects. Online research has limitations, but studies show that it produces results similar to those of laboratory research.

A theory provides a framework for describing and understanding data in a meaningful way. Some personality theories may be partly autobiographical, reflecting a theorist's life experiences. Personality theorists present different images of human nature. Some of the issues on which they differ are free will versus determinism, nature versus nurture, the importance of the past versus the present, uniqueness versus universality, equilibrium versus growth, and optimism versus pessimism.

Review Questions

1. How do you define personality?
2. Give examples of how social media engagement can both shape and reflect our personality.
3. Compare and contrast Western and Eastern cultures, with a focus on how they may differentially shape personality.

4. What makes a personality measure reliable and valid?
5. What are the strengths and weaknesses of each of the following personality measurements strategies, considering quantitative versus qualitative data as well as objectivity versus subjectivity: self-report measures, projective techniques, clinical interviews, behavioral observations, experience sampling?
6. What are some of the challenges to measuring personality across cultures? Provide three examples.
7. Explain why it is important to consider broader social context in understanding personality differences by race, ethnic, or gender group.
8. What are the advantages and disadvantages of the correlational and experimental research designs?
9. We asked six questions in our discussion of human nature. Write down your thoughts on these issues. At the end of the book, you will be asked to reconsider these questions to consider how your views might have changed.

Suggested Readings

- Archer, R., & Smith, S. (2014). *Personality assessment* (2nd ed.). New York: Routledge. An introduction to ways of assessing personality, including the MMPI and other self-report inventories, as well as projective techniques such as the Rorschach and the TAT.
- Elms, A. C. (1994). *Uncovering lives: The uneasy alliance of biography and psychology.* Oxford University Press. Contains insightful psychological portraits of writers, political leaders, and personality theorists, including Freud, Jung, Allport, and Skinner.
- Funder, D. (2012). *The personality puzzle* (6th ed.). Norton. An easy-to-read introduction to personality, covering all aspect of the field, including applications and theories.
- Gosling, S., & Johnson, J. (2010). *Advanced methods for conducting online behavioral research.* American Psychological Association. A primer for conducting online research, including recruiting subjects, research ethics, data security, and data tracking. Deals with surveys and experimental approaches; for sophisticated computer users.
- Kaplan, R., & Saccuzzo, D. (2012). *Psychological testing: Principles, applications and issues* (8th ed.). Cengage. All you need to know about psychological assessment and testing. Covers correlations, interviewing techniques, and various forms of assessment in real-world situations such as counseling and job applications.
- Robins, R., Fraley, R., & Krueger, R. (2007). *Handbook of research methods in psychology.* Guilford. A clear introduction to the wide range of research approaches to the study of personality, including experimental, longitudinal, biographical, genetic, self-report, projective, neuroscience, and online research.

Part 1

The Psychoanalytic Approach

The earliest approach to the formal study of personality was psychoanalysis, the creation of Sigmund Freud, who began his work in the closing years of the 19th century. Nearly every personality theory developed in the years since Freud's work owes a debt to his position—either building on it or opposing it.

Psychoanalysis as Freud conceived it emphasized unconscious forces, biologically based drives of sex and aggression, and unavoidable conflicts in early childhood. These were considered the rulers and shapers of our personality.

Freud's views had an impact not only on psychology but also on the general culture. He succeeded in redefining the human personality and revolutionizing our ways of thinking about human nature—about who we are.

Chapter 2

Turn your eyes inward, look into your own depths, learn to first know yourself. —Sigmund Freud

Sigmund Freud: Psychoanalysis

Learning Objectives

2.1 Describe Freud's distinction between the conscious and unconscious.

2.2 Compare and contrast the id, ego, and superego.

2.3 Define each of the defense mechanisms in one sentence each.

2.4 List the psychosexual stages of development.

2.5 Identify the aspects of each psychosexual stage that are supported by research and the aspects that are not supported by research.

2.6 Compare and contrast the following assessment approaches, considering strengths and weaknesses: free association, dream analysis, and case study.

2.7 Explain the contributions of Anna Freud to psychoanalysis and Freudian psychology.

2.8 Summarize the Freudian view of personality in five sentences.

It is no exaggeration to say that personality theory has been influenced more by Sigmund Freud than by anyone else. His system of **psychoanalysis** was the first formal theory of personality and is still most widely known. This system focused on the unconscious mind. Not only did Freud's work affect thinking about personality in psychology and psychiatry, but it also made a tremendous impact on the way we look at human nature in general. Few ideas in the history of civilization have had such a broad and profound influence. When he died in 1939, the *New York Times* noted his passing in an editorial stating that Freud was "the most effective disturber of complacency in our time" (quoted in Bakalar, 2011, p. D7).

Many of the personality theories proposed after Freud are derivatives of or elaborations on his basic work. Others owe their impetus and direction in part to their opposition to Freud's psychoanalysis. It would be difficult to comprehend and assess the development of the field of personality without first understanding Freud's system. Nonetheless, as we will discuss, it is important to note that Freud's theories have not

received ample research support and can be considered misogynist and sexist against women. Many of the terms he may have used are not the modern accepted terms. Knowledge of historical theories is important, but so is the criticism of them.

The Life of Freud (1856–1939)

The Early Years

Freud was born in 1856, in Freiberg, Moravia, which is now the town of Pribor, in the Czech Republic. His father was a relatively unsuccessful wool merchant. When his business failed in Moravia, he moved the family to Leipzig, Germany, and then later, when Freud was 4, to Vienna, where Freud remained for almost 80 years.

When Freud was born, his father was 40 years old and his mother (his father's third wife) was only 20. His father was strict and authoritarian. Freud later remembered how much hostility and anger he felt toward him when he was growing up. He also felt superior to his father as early as age 2. Freud's mother was attractive, and she was extremely protective and loving toward Sigmund, her first son. Freud felt a passionate, even sexual attachment to her, a relationship that set the stage for his concept of the Oedipus complex. As we will see, much of Freud's theory reflected and built on his own experiences as a child.

Freud's mother took pride in young Sigmund, convinced he would become a great man. Among Freud's lifelong personality characteristics were a high degree of self-confidence, an intense ambition to succeed, and dreams of glory and fame. Showing the impact of his mother's continuing attention and support, he wrote: "A man who has been the indisputable favorite of his mother keeps for life the feeling of a conqueror, that confidence of success that often induces real success" (quoted in Jones, 1953, p. 5). There were eight children in the Freud family, two of them his adult half-brothers with children of their own. Freud resented them all and grew jealous whenever another competitor for his mother's full-time attention and affection was born.

From an early age he exhibited a high level of intelligence, which his parents helped to foster. His sisters were not allowed to practice the piano lest the noise disturb Freud's studies. He was given a room of his own; he often took his meals there so as not to lose time from his studies. The room was the only one in the apartment to contain a prized oil lamp; the rest of the family had to use candles.

Freud entered high school a year earlier than was typical and was frequently at the head of his class. He was fluent in German and Hebrew, and he mastered Latin, Greek, French, and English in school and taught himself Italian and Spanish. As a youngster he enjoyed reading Shakespeare in English. Freud had many interests, including military history, but when it came time to choose a career from among the few professions that were open to Jews in Vienna, he settled on medicine.

It was not that he wanted to become a physician but rather he believed that the study of medicine would lead to a career in scientific research, which would in turn bring him the fame he so strongly wanted and felt he deserved.

The Cocaine Episode

While in medical school, Freud began to experiment with cocaine, which at that time was not an illegal substance. He took the drug himself and persuaded his fiancée, sisters, and friends to try it. Freud called cocaine a miracle drug and claimed it eased his depression and chronic indigestion. He "continued to use cocaine to make bad days good and good days better. Cocaine thrilled him in a manner that everyday life could not. He wrote romantic, often erotic letters to his fiancée [and] dreamed grandiose dreams of his future career" (Markel, 2011, p. 81).

In 1884, he published an article about cocaine's beneficial effects, thinking it would make him famous. But that was not to be. This article was later judged to be a major contributor to the epidemic of cocaine use which swept over Europe and the United States, lasting well into the 1920s. Freud was strongly criticized for his part in unleashing the cocaine plague.

The publicity later brought him infamy rather than fame, and for the rest of his life he tried to erase his earlier endorsements of cocaine, deleting all references to it from his own bibliography. However, he continued to use cocaine well into middle age (Freud, 1985). He apparently took it from 1884 to 1896, and then switched to wine. In June 1899, he wrote to a friend, "I am gradually becoming accustomed to the wine; it seems like an old friend. I plan to drink a lot of it in July" (quoted in Markel, 2011, p. 177).

psychoanalysis Sigmund Freud's theory of personality and system of therapy for treating mental disorders

Finding the Sexual Basis of Neurosis

Freud was discouraged from pursuing his intended career in scientific research when his major professor told him that it would be many years before he could obtain a professorship and support himself financially. Because he lacked an independent income, he believed his only choice was to enter private practice. A further impetus was his engagement to Martha Bernays, which lasted 4 years before they could afford to marry. Freud established practice as a clinical neurologist in 1881 and began his exploration of the personalities of people suffering from emotional disorders.

He studied several months in Paris with the psychiatrist Jean Martin Charcot, a pioneer in the use of hypnosis, who alerted Freud to the possible sexual basis of neurosis (an outdated term, remember). Freud overheard Charcot say that a particular patient's problem was sexual in origin. "In this sort of case," Charcot said, "it's always a question of the genitals—always, always, always" (Charcot quoted in Freud, 1914, p. 14).

Freud noted that while Charcot was discussing this issue he "crossed his hands in his lap and jumped up and down several times . . . for a moment I was almost paralyzed with astonishment" (Freud quoted in Prochnik, 2006, p. 135).

When Freud returned to Vienna, he was again reminded of the possible sexual origin of emotional problems. A colleague described a woman patient's anxiety, which the therapist believed stemmed from her husband's impotence. The husband had never had sexual relations with his wife in 18 years of marriage.

"The sole prescription for such a malady," Freud's colleague said, "is familiar enough to us, but we cannot order it. It runs: *Penis normalis dosim repetatur!*" (quoted in Freud, 1914, p. 14). As a result of these incidents and his own sexual conflicts, Freud was led to consider the possibility of a sexual basis for emotional disturbance.

Childhood Sexual Abuse: Fact or Fantasy?

Content Warning: The following section discusses sexual abuse.

After several years in clinical practice, Freud was increasingly convinced that sexual conflicts were the primary cause of all neuroses. He claimed that the majority of his women patients reported traumatic sexual experiences from their childhoods. These events resembled seduction, with the seducer usually being an older male relative, typically the father. Today we call such experiences child abuse, and they often involve rape or incest. Freud believed that it was these early sexual traumas that caused neurotic behavior in adulthood.

About a year after he published this theory, Freud changed his mind and announced that in most cases the childhood sexual abuse his patients told him about had never really happened. They had been telling him fantasies, Freud claimed. At first, this was a stunning blow, for it seemed that the foundation of his theory of neurosis had been undermined. How could childhood sexual traumas be the cause of neurotic behavior if they had never happened?

On further reflection, Freud concluded that the fantasies his patients described were quite real to them. They believed that the shocking sexual events had actually happened. Because the fantasies still focused on sex, then sex remained the cause of adult neuroses. In 1898, he wrote that "the most immediate and most significant causes of neurotic illness are to be found in factors arising from sexual life" (quoted in Breger, 2000, p. 117).

It is important to note that Freud never claimed that all the childhood sexual abuses his patients reported were fantasies; what he did deny was that his patient's reports were *always* true. It was, Freud wrote, "hardly credible that perverted acts against children were so general" (Freud, 1954, pp. 215–216).

Today we know that childhood sexual abuse is much more common than once thought, which led contemporary scholars to suggest that Freud's original interpretation of the seduction experiences may have been correct. We do not know whether Freud deliberately suppressed the truth, perhaps to make his theory more acceptable, or whether he genuinely believed that his patients were describing fantasies. It may well be that "more of Freud's patients were telling the truth about their childhood experiences than [Freud] was ultimately prepared to believe" (Crewsdon, 1988, p. 41).

Ten years after Freud changed his mind and announced that childhood seduction scenarios were fantasies, he admitted in a letter to a friend that such traumatic experiences were frequently genuine. A few years later he confided to another friend that "I have myself analyzed and cured several cases of real incest (of the most severe kind)" (quotes from Kahr, 2010, p. 4).

The conclusion that child sexual abuse occurred more often than Freud was willing to admit publicly was reached by one of Freud's disciples in the 1930s, and Freud tried to suppress the publication of his ideas. It has also been suggested that Freud changed his position on the seduction theory because he realized that if sexual abuse was so widespread, then many fathers (including perhaps his own) would be considered suspect of perverse acts against their children (Krüll, 1986).

Research on Repressed Memories of Childhood Sexual Abuse In the 1980s and 1990s, the issue of repressed memories resurfaced in sensational legal proceedings involving people who claimed they suddenly recalled incidents of abuse that had occurred years earlier (Smith-Lee, 1996). People, mostly women, brought criminal charges against fathers, uncles, and family friends; people, mostly men, brought charges against priests, coaches, and teachers. Some of the accused were convicted and imprisoned on the basis of memories of incidents said to have taken place as long as 20 years before. Such accusations and subsequent trials are still taking place today.

Research on repressed memories of childhood sexual abuse has found ample evidence that such abuse can be forgotten for many years before being recalled (Delmonte, 2000). A study of women who had either repressed their memories, recovered such memories, or had never forgotten the experiences found that those who reported recovered memories scored higher on measures of fantasy proneness and dissociation (a splitting off of mental processes into separate streams of awareness) (McNally et al., 2000). Such states could, of course, be attributed to the childhood trauma.

Despite evidence to support the existence of repressed memories of childhood sexual abuse that did occur, research has also demonstrated how easily false memories can be implanted and recollections distorted, to the point where something that never occurred can be made conscious and appear to be genuine (Loftus & Ketcham, 1994; Ofshe & Watters, 1994).

In one study, young children were interviewed 4 years after they had spent 5 minutes playing with a man sitting across a table. The man never touched the children. During follow-up interviews, researchers created a climate of accusation by telling the children they would be questioned about an important event in their lives: "Are you afraid to tell?" they were asked. "You'll feel better once you've told," they were told (Ceci & Bruck, 1993, p. 421). One-third of the children agreed with the interviewer's suggestion that they had been hugged and kissed by the man. Two of the children agreed with the suggestion that they had been photographed in the bathroom; one agreed that the man had given her a bath. This study highlights that people may say they remember something in their childhood that did not actually happen if other people strongly suggest it did.

A study involving college students in Italy showed that dream interpretation could be used to implant false memories (Mazzoni et al., 1999). Half of the students were told by a psychologist who was also a popular radio celebrity that their dreams were manifestations of repressed memories of traumatic childhood events. Examples of these incidents included being abandoned by their parents or lost in an unfamiliar place. The other group of subjects did not receive such interpretations of their dreams.

All the subjects had been selected on the basis of questionnaire responses completed weeks earlier in which they had stated that no traumatic events had occurred during their childhood. When questioned 10 to 15 days after the dream interpretations, the majority of the participants in the experimental group, who were told their dreams indicated they had experienced a traumatic childhood event, agreed that the traumatic experiences had really happened and that they had repressed the memories for years (Mazzoni et al., 1999).

Elizabeth Loftus, a pioneering psychologist and researcher in the area of memory, concluded that overall,

> there is little support for the notion that trauma is commonly banished out of awareness and later reliably recovered by processes beyond ordinary forgetting and remembering. . . . There can be no doubt that 'memories' for factually fake as well as impossible, or at least highly improbable, horrific traumatic events were developed [or implanted], particularly among persons subjected to suggestive memory recovery procedures. (Loftus & Davis, 2006, pp. 6, 8)

However, it is important to keep in mind that childhood sexual abuse does occur. It is a haunting reality for many people and far more widespread than Sigmund Freud envisioned in the 19th century. In 2019 in the United States, over 650,000 children were abused, with over 7 percent of these cases including sexual abuse (Office of the Administration for Children and Families, 2021). The effects can be debilitating. Men and women who were sexually abused as children are more likely to have tendencies toward anxiety, depression, self-destructiveness, low self-esteem, and suicide (see, for example, McNally et al., 2006; Pilkington & Lenaghan, 1998; Westen, 1998).

People who have experienced sexual abuse and want support can call the National Sexual Assault Hotline, 1-800-656-4673.

Freud's Own Sex Life

Content Warning: The following section discusses sexual abuse.

It is a paradox that Freud, who emphasized the importance of sex in emotional life, experienced so many personal sexual conflicts. He "had no contact with members of the opposite sex throughout [his early years]. He was

decidedly shy and afraid of women and was a virgin when he married at age 30" (Breger, 2009, p. 11). His attitude toward sex was negative. He wrote about the dangers of sex, even for those who were not neurotic, and urged people to rise above what he called the common animal need for sex.

The sex act was degrading, he wrote, because it contaminated both mind and body. He apparently ended his own sex life at the age of 41, writing to a friend: "sexual excitation is of no more use to a person like me" (Freud, 1954, p. 227). He occasionally had been impotent during his marriage and had sometimes chosen to abstain from sex because he disliked condoms and *coitus interruptus*, the standard birth control methods of the day.

Freud blamed his wife, Martha, for the termination of his sex life, and for many years he had dreams involving his resentment toward her for forcing him to abandon sex. "He felt resentful because she became pregnant so easily, because she often became ill during her pregnancies, and because she refused to engage in any kind of sexual activity beyond [procreative acts]" (Elms, 1994, p. 45). Thus, Freud's periods of impotence may also have been related to his fear that Martha would become pregnant again.

Freud's Neurotic Episode

Freud's personal frustrations and conflicts about sex surfaced in the form of neuroses, in the same way he believed sexual difficulties affected his patients. In his 40s, he experienced what was deemed at the time a severe neurotic episode, which he described as involving "odd states of mind not intelligible to consciousness—cloudy thoughts and veiled doubts, with barely here and there a ray of light. . . . I still do not know what has been happening to me" (Freud, 1954, pp. 210–212). He was also troubled by a variety of physical symptoms, including migraine headaches, urinary problems, and a spastic colon. He worried about dying, feared for his heart, and became anxious about travel and open spaces. It was not a happy time for him.

Freud diagnosed his condition as anxiety neurosis and neurasthenia—a neurotic condition characterized by weakness, worry, and disturbances of digestion and circulation. He traced both disturbances to an accumulation of sexual tension. In his writings, he proposed that neurasthenia in men resulted from masturbation, and anxiety neurosis arose from abnormal sexual practices such as *coitus interruptus* and abstinence. By so labeling his symptoms, "his personal life was thus deeply involved in this particular theory, since with its help he was trying to interpret and solve his own problems. . . . Freud's theory of actual neurosis is thus a theory of his own neurotic symptoms" (Krüll, 1986, pp. 14, 20).

Despite Freud's personal conflicts about sex (or perhaps because of them), he was fascinated by beautiful women. A friend noted that "among [Freud's] students there were so many attractive women that it began to look like more than a matter of chance" (Roazen, 1993, p. 138).

Analyzing Freud's Dreams

Freud psychoanalyzed himself through the study of his own dreams, a process he continued for the rest of his life. When he started, he wrote to a friend that "The chief patient I am busy with is myself" (quoted in Kandel, 2012, p. 63). It was during this period that he performed his most creative work in developing his theory of personality. Through the exploration of his dreams, he realized, for the first time, how much hostility he felt toward his father. He recalled his childhood sexual longings for his mother and dreamed of a sex wish toward his eldest daughter. Thus, he formulated much of his theory around his own neurotic conflicts and childhood experiences, as filtered through his interpretations of his dreams. As he perceptively observed, "The most important patient for me was my own person" (Freud quoted in Gay, 1988, p. 96).

Freud's Ideas Attract Attention

As his work became known through published articles and books as well as papers presented at scientific meetings, Freud attracted a group of disciples who met with him once a week to learn about his new system. The topic of their first meeting was the psychology of cigar making. One writer referred to the group as a second-rate "collection of marginal neurotics" (Gardner, 1993, p. 51). Freud's daughter Anna described the early disciples a bit more charitably as the "unconventional ones, the doubters, those who were dissatisfied with the limitations imposed on knowledge; also among them were the odd ones, the dreamers, and those who knew neurotic suffering from their own experience" (quoted in Coles, 1998, p. 144).

The disciples included Carl Jung and Alfred Adler, who later broke with Freud to develop their own theories. Freud considered them traitors to the cause, and he never forgave them for disputing his approach to psychoanalysis. At a family dinner, he complained about his followers' disloyalty. "The trouble with you, Sigi," said his aunt, "is that you just don't understand people" (quoted in Hilgard, 1987, p. 641).

At home, Freud led a disciplined and regimented life. His daughter-in-law remarked, "The Freuds had their noontime meal, the main meal in Vienna, at the stroke of one, and war or no war, you had to be there on time or not eat" (quoted in Berman, 2008, p. 561).

Freud Comes to America

In 1909, Freud received formal recognition from the American psychological community. He was invited to give a series of lectures at Clark University in Worcester, Massachusetts, and to receive an honorary doctoral degree. Although grateful for the honor, Freud did not like the United States and complained about its informality, bad cooking, and scarcity of bathrooms. Although he had been troubled by gastrointestinal problems for many years prior to his visit, "he blamed the New World for ruining his digestion" (Prochnik, 2006, p. 35).

Freud's system of psychoanalysis was warmly welcomed in the United States. Two years after his visit, American followers founded the American Psychoanalytic Association and the New York Psychoanalytic Society. Over the next few years, psychoanalytic societies were established in Boston, Chicago, and Washington, DC.

In 1920, only 11 years after his visit to America, more than 200 books on his work had been published in the United States (Abma, 2004). Leading U.S. magazines such as *Time*, *Ladies' Home Journal*, and *The New Republic* featured articles about Freud. Dr. Benjamin Spock's phenomenally successful baby and childcare books that influenced the raising of several generations of America children were based on Freud's teachings. Freud's work on dreams even inspired a popular song that included the line: "Don't tell me what you dream'd last night—For I've been reading Freud" (quoted in Fancher, 2000, p. 1026). America may have made Freud sick, so he claimed, but it also helped bring him worldwide fame.

Pause for Reflection

Why do you think that Freud's theory was so appealing?

The Final Years

During the 1920s and 1930s, Freud reached the pinnacle of his success, but at the same time his health began to deteriorate seriously. From 1923 until his death 16 years later, he underwent 33 operations for cancer of the mouth, perhaps as a result of his smoking 20 cigars daily. Portions of his palate and upper jaw were surgically removed, and he experienced almost constant pain, for which he refused medication. He also received X-ray and radium treatments and even had a vasectomy, which some physicians thought would halt the growth of the cancer.

When the Nazis came to power in Germany in 1933, they expressed their feelings about Freud by publicly burning his books, along with those of other so-called "enemies of the state," such as the physicist Albert Einstein and the writer Ernest Hemingway. "What progress we are making," Freud wrote. "In the Middle Ages they would have burnt me; nowadays they are content with burning my books" (Freud quoted in Jones, 1957, p. 182).

In 1938, the Nazis occupied Austria, but despite the urgings of his friends, Freud refused to leave Vienna. Several times gangs of Nazis invaded his home. It was not until his daughter Anna was arrested (and later released) that Freud agreed to leave for London. Four of his sisters died in Nazi concentration camps.

Freud's health became even worse, but he remained mentally alert and continued to work almost to the last day of his life. By late September 1939, he told his physician, Max Schur, "Now it's nothing but torture and makes no sense any more" (quoted in Schur, 1972, p. 529). The doctor had promised that he would not let Freud suffer needlessly. He administered three injections of morphine over the next 24 hours, each dose greater than necessary for sedation, and brought Freud's long years of pain to an end.

Instincts: The Propelling Forces of the Personality

Freud wrote that **instincts** were the basic elements of the personality, the motivating forces that drive behavior and determine its direction. Freud's German term for this concept is *Trieb*, which is a driving force or impulse (Bettelheim, 1984). Instincts are a form of energy—transformed physiological energy—that connects the needs of the body with the wishes of the mind.

The stimuli for instincts—hunger and thirst, for example—are internal. When a need such as hunger is aroused in the body, it generates a state of physiological excitation or energy. The mind transforms this bodily energy into a wish. It is this wish—the mental representation of the physiological need—that is the instinct

instincts In Freud's system, the basic elements of the personality, the motivating forces based on internal stimuli that drive behavior and determine its direction.

or driving force that motivates the person to behave in a way that satisfies the need. A hungry person, for example, will look for food. The instinct is not the bodily state itself (the hunger). Rather, it is the bodily need transformed into a mental state, a wish.

When the body is in such a state of need, the person experiences a feeling of tension or pressure. The aim of an instinct is to satisfy the need and thereby reduce the tension. Freud's theory is therefore a homeostatic approach, meaning that we are motivated to restore and maintain a condition of physiological equilibrium, or balance, to keep the body free of tension.

Freud believed that we always experience a certain level or amount of instinctual tension and that we must continually act to reduce it. It is not possible to escape the pressure of our physiological needs as we might escape some annoying stimulus in our external environment. This means that instincts are always influencing our behavior, in a cycle of need leading to reduction of need.

People may take different paths to satisfy their needs. For example, the sex drive may be satisfied by sexual interactions with other people or with the self, or the sex drive may be channeled into a totally different form of activity. Freud believed that psychic energy could be displaced to substitute objects, and this displacement was of primary importance in determining an individual's personality.

Although the instincts are the exclusive source of energy for human behavior, the resulting energy can be invested in a variety of activities. This helps explain the diversity we see in human behavior. All the interests, preferences, and attitudes we display as adults were believed by Freud to be displacements of energy from the original objects that satisfied the instinctual needs.

Two Types of Instincts

Freud grouped the instincts into two categories: life instincts and death instincts.

The Life Instincts The **life instincts** serve the purpose of survival of the individual and the species by seeking to satisfy the needs for food, water, air, and sex.

The life instincts are oriented toward growth and development. The psychic energy manifested by the life instincts is the **libido**. The libido can be attached to or invested in objects, a concept Freud called **cathexis**. If you like your roommate, for example, Freud would say that your libido is cathected to that person.

The life instinct Freud considered most important for the personality is sex, which he defined in broad terms. He was not referring exclusively to the erotic but also included almost all pleasurable behaviors and thoughts. He described his view as enlarging or extending the accepted concept of sexuality. He considered the sexual impulses to include "all of those merely affectionate and friendly impulses to which usage applies the exceedingly ambiguous word 'love' " (Freud, 1925, p. 38).

Freud regarded sex as our primary motivation. Erotic wishes arise from the body's erogenous zones: the mouth, anus, and sex organs. He suggested that people are predominantly pleasure-seeking beings, and much of his personality theory revolves around the necessity of inhibiting or suppressing our sexual longings.

The Death Instincts In opposition to the life instincts, Freud postulated the destructive or **death instincts**. Drawing from biology, he stated the obvious fact that all living things decay and die, returning to their original inanimate state, and he believed that people have an unconscious wish to die. One component of the death instincts is the **aggressive drive**, which he saw as the wish to die turned against objects other than the self. The aggressive drive compels us to destroy, conquer, and kill. Freud came to consider aggression as compelling a part of human nature as sex.

Freud developed the notion of the death instincts later in his life, as a reflection of his own experiences. He endured the physiological and psychological debilitations of age, his cancer got worse, and he witnessed the large-scale carnage of World War I. In addition, one of his daughters died at the age of 26, leaving two young children. All these events affected him deeply, and, as a result, death and aggression became major themes in his theory and in his own life as well. In his later years, Freud dreaded his own death and exhibited high levels of hostility, hatred, and aggressiveness toward those colleagues and disciples who disputed his views and left his psychoanalytic circle.

The concept of the death instincts achieved only limited acceptance, even among Freud's most

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life instincts The drive for ensuring survival of the individual and the species by satisfying the needs for food, water, air, and sex.

libido To Freud, the form of psychic energy, manifested by the life instincts, that drives a person toward pleasurable behaviors and thoughts.

cathexis An investment of psychic energy in an object or person.

death instincts The unconscious drive toward decay, destruction, and aggression.

aggressive drive The compulsion to destroy, conquer, and kill.

dedicated followers. One psychoanalyst wrote that the idea should be "relegated to the dustbin of history" (Sulloway, 1979, p. 394). Another suggested that if Freud were a genius, then the suggestion of the death instincts was an instance of a genius having a bad day (Eissler, 1971).

Nonetheless, across the world, it is becoming increasingly important to understand the experience of people in old age who feel disconnected from their lives, perhaps because of illness or an inability to maintain the same activities they used to, in a way that may bring on depression and death wishes (e.g., Van Wijngaarden et al., 2015). Other research suggests that the death wish may drive some people's travel behaviors—by visiting places with live conflicts, tourists risk death to themselves and may be trying to unconsciously touch on past traumas to feel alive (Buda, 2015).

Pause for Reflection

What role do you think the two instincts play in your life?

The Levels of Personality

Freud's original conception divided personality into three levels: the conscious, the preconscious, and the unconscious. The **conscious**, as Freud defined the term, corresponds to its ordinary everyday meaning. It includes all the sensations and experiences of which we are aware at any given moment. As you read these words, for example, you may be conscious of the sight of the page, a message you want to send to a friend, and someone playing loud music next door.

Freud considered the conscious to be a limited aspect of personality because only a small portion of our thoughts, sensations, and memories exists in conscious awareness at any one time. He likened the mind to an iceberg. The conscious is that part above the surface of the water—the tip of the iceberg.

More important, according to Freud, is the unconscious, that larger, invisible portion below the surface. This is the focus of psychoanalytic theory. Its vast, dark depths are the home of the instincts, those wishes and desires that direct our behavior. The **unconscious** contains the major driving power behind all behaviors and is the repository of forces we cannot see or control.

Between these two levels is the preconscious. This is the storehouse of all our memories, perceptions, and thoughts of which we are not consciously aware at the moment but that we can easily summon into consciousness. For example, in the unlikely event your mind strays from this page and you begin to think about what you did last night, you would be summoning up material from your preconscious into your conscious. We often find our attention shifting back and forth from experiences of the moment to events and memories in the preconscious.

Research on the Unconscious

The notion that unconscious forces can influence conscious thought and behavior is now well established. Research shows that unconscious influences may be even more pervasive than Freud suggested (Custers & Aarts, 2010; Scott & Dienes, 2010; Gafner, 2012). One personality researcher observed that "there is agreement that much [psychological] functioning occurs without conscious choice and that some of our behavior actually occurs in opposition to what is consciously desired" (Pervin, 2003, p. 225). Psychologists also recognize that much of the information processing involved in cognitive activities is unconscious (Armstrong & Dienes, 2014). Some even propose that the causal mechanisms underlying all behavior and thought may be unconscious (Bargh & Chartrand, 1999; Wegner & Wheatley, 1999).

> It now appears that the unconscious is "smarter" than first thought, capable of processing complex verbal and visual information and even anticipating (and planning for) future events. . . . No longer simply a repository for drives and impulses, the unconscious appears to play a role in problem solving, hypothesis testing, and creativity. (Bornstein & Masling, 1998, pp. xiii–xxviii)

Subliminal Perception

Much research on the nature of the unconscious involves **subliminal perception** in which stimuli are presented to people below their level of conscious awareness. (The word *subliminal* derives from *sub*, meaning below, and *limen*, meaning threshold.) Despite their inability to perceive the stimuli, their conscious processes and behavior are activated by the stimuli. In other words, people can be influenced by things they are not consciously aware of perceiving.

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conscious The part of the mind and the self that one is aware of and can control.

unconscious The part of the mind and the self that one is not aware of but that drives behavior.

subliminal perception Perception below the threshold of conscious awareness.

In one study, subjects were shown a series of words and pictures for such a brief time that they could not consciously perceive them (Shevrin, 1977). Then, when they were asked to free-associate, what they talked about reflected the stimuli they had been shown but had not actually been able to see. For example, when the stimulus was a picture of a bee, the associations included the words *sting* and *honey.* The subjects' thought processes were affected by the stimuli, even though they were unaware of having seen them. Many such studies using subliminal perception support the idea that cognitive activity is influenced by the unconscious (Westen, 1998). People vary in the extent to which information from the outside makes its way into the unconscious and the unconscious affects behavior. For example, one study of young adults who live in Madrid, Spain found that on average women, more than men, and people who were higher in neuroticism were better able to perceive subliminally presented stimuli (Sutil-Martín & Rienda-Gómez, 2020).

Effects on Behavior

A series of experiments with college students in the United States and in Germany showed that goals could be activated outside of conscious awareness and people engaged in behaviors to reach those goals without realizing it. For example, the subliminally-activated goal of performing better on an experimental task led them to actually perform better. In another instance, the unconsciously-activated goal of being cooperative on an experimental task led to cooperative behaviors. The authors of the study concluded that "behavioral goals can become activated without any consciously made choice required" (Bargh et al., 2001, p. 18).

When college students in the United States were shown happy faces below the level of conscious awareness, they consumed more of a beverage that was made available to them than did students who were exposed to images of angry faces. The happy-face group also indicated a greater willingness to pay for their drink and to want more of it than did the angry-face group. Although none of the students consciously saw the faces, the stimuli had registered in their unconscious and influenced their behavior (Winkielman et al., 2005).

Effects on Emotional Processes

Other imaginative research has demonstrated that the unconscious can influence emotional as well as cognitive and behavioral processes. In one such study, the words *Mommy and I are one* were flashed for 4 milliseconds to research participants, along with a picture of a man and a woman joined together at their shoulders.

Male patients with schizophrenia exposed to this subliminally presented stimulus showed a greater improvement than did a control group not exposed to that message. Female schizophrenic patients showed no improvement when exposed to that message but did show improvement when presented with the subliminal message: *Daddy and I are one* (Silverman & Weinberger, 1985).

In other studies, the *Mommy and I are one* message was effective in helping research participants stop smoking and drinking, become more assertive, eat a more healthful diet, and reduce fears. These messages in particular were thought to be helpful because they were simple and provided a soothing message of unity with one's parent. Thus, a subliminally-presented message has been shown to have therapeutic value (Weinberger & Silverman, 1990). More recent research suggests that the effect of such a subliminal message depends on the personality of the individual. The *Mommy and I are one* message led to "symbiotic oneness" for people who felt highly connected to their mothers (i.e., high self–other overlap) but led to "defensive autonomy" for people who felt highly disconnected from their mothers (Sohlberg et al., 2000).

A study of adults in England found that those who scored high in anxiety sensitivity were far more likely to see anxiety-related words that were presented below the level of conscious awareness than were adults who scored low in anxiety sensitivity. The sensitivity of the first group made them more vigilant and thus more likely to perceive anxiety-related words, even though the words were presented so rapidly that the people did not consciously see them (Hunt et al., 2006).

Other research has shown that subliminally presented stimuli—in this case, fearful faces—actually raised the physiological stress levels of the subjects, even though they did not actually see the stimuli (Hansel & von Kanel, 2013).

The Structure of Personality

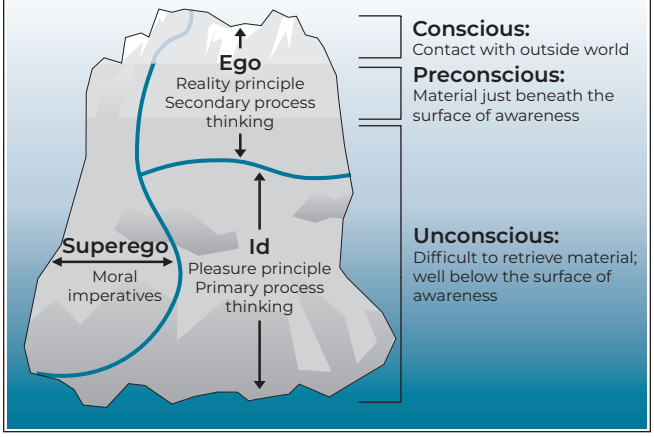
The Id

Freud later revised this notion of three levels of personality and introduced in its place three basic structures in the anatomy of the personality: the id, the ego, and the superego (see Figure 2.1). The **id** corresponds to Freud's earlier notion of the

Id To Freud, the aspect of personality allied with the instincts; the source of psychic energy, the id operates according to the pleasure principle.

Figure 2.1

Freud's levels and structures of personality



Source: From Weiten, *Psychology: Themes and Variations* (2nd Ed.). © 1992 Cengage Learning.

unconscious (although the ego and superego have unconscious aspects as well). The id is the reservoir for the instincts and libido (the psychic energy manifested by the instincts). The id is a powerful structure of the personality because it supplies all the energy for the other two components.

Because the id is the reservoir of the instincts, it is vitally and directly related to the satisfaction of bodily needs. Recall that Freud argued that tension is produced when the body is in a state of need, and the person acts to reduce this tension by satisfying the need. The id operates in accordance with what Freud called the **pleasure principle**. Through its concern with tension reduction, the id functions to increase pleasure and avoid pain.

The id strives for immediate satisfaction of its needs and does not tolerate delay or postponement of satisfaction for any reason. It knows only instant gratification; it drives us to want what we want when we want it without regard for what anyone else wants. The id is a selfish, pleasure-seeking structure—primitive, amoral, insistent, and rash.

The id has no awareness of reality. We might compare the id to a newborn baby who cries and frantically waves its legs and arms when its needs are not met but who has no knowledge of how to bring about satisfaction. Hungry infants cannot find food on their own. The only ways the id can attempt to satisfy its needs are through reflex action and wish-fulfilling hallucinatory or fantasy experience, which Freud labeled **primary-process thought**.

The Ego

Most children learn that they cannot act impulsively according to any drive or desire. For example, kids learn that they have to postpone the pleasure obtained from relieving anal tensions until they get to a bathroom, or that they cannot indiscriminately give vent to sexual and aggressive longings. The growing child is taught to deal intelligently and rationally with other people and the outside world and to develop the powers of perception, recognition, judgment, and memory—the powers adults use to satisfy their needs. Freud called these abilities **secondary-process thought**.

We can sum up these characteristics as reason or rationality, and they are contained in Freud's second structure of personality, the **ego**, which is the rational master of the personality. Its purpose is not to thwart the impulses of the id but to help the id obtain the tension reduction it craves. Because the ego is aware of reality, however, it decides when and how the id instincts can best be satisfied. It determines appropriate and socially acceptable times, places, and objects that will satisfy the id impulses.

The ego does not prevent id satisfaction. Rather, it tries to postpone, delay, or redirect it in order to meet the demands of reality. It perceives and manipulates the environment in a practical and realistic manner and so is said to operate in accordance with the **reality principle**. (The reality principle stands in opposition to the pleasure principle by which the id operates.)

The ego thus exerts control over the id impulses. Freud compared the relationship of the ego and the id to that of a rider on a horse. The raw, brute power of the horse must be guided, checked, and reined in by the rider; otherwise the horse could bolt and run, throwing the rider to the ground.

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pleasure principle The principle by which the id functions to avoid pain and maximize pleasure.

primary-process thought Childlike thinking by which the id attempts to satisfy the instinctual drives.

secondary-process thought Mature thought processes needed to deal rationally with the external world.

ego To Freud, the rational aspect of the personality, responsible for directing and controlling the instincts according to the reality principle.

reality principle The principle by which the ego functions to provide appropriate constraints on the expression of the id instincts.

The ego serves two masters—the id and reality—and is constantly mediating and striking compromises between their conflicting demands. Also, the ego is never independent of the id. It is always responsive to the id's demands and derives its power and energy from the id.

It is the ego, the rational master, which keeps you working at a job you may not like, if the alternative is being unable to provide food and shelter for your family. It is the ego that forces you to get along with people you dislike because reality demands such behavior from you as an appropriate way of satisfying id demands.

This controlling and postponing function of the ego must be exercised constantly. If not, the id impulses might come to dominate and overthrow the rational ego. A person controlled by the id can easily become a danger to society and might end up in treatment or in prison. Freud argued that we must protect ourselves from being controlled by the id and proposed various unconscious mechanisms with which to defend the ego.

So far, we have an idea of Freud's view of the human personality as being in a constant state of battle. It is trying to restrain the id while at the same time serving it, perceiving and manipulating reality to relieve the tensions of the id impulses. Driven by instinctual biological forces that it strives to satisfy, the personality walks a tightrope between the demands of the id and the demands of reality, both of which require constant vigilance.

Research on the Ego Psychoanalytic researchers have identified two components of the ego: ego control and ego resiliency. Ego control, as you would expect from the name, is close to Freud's original conception. It refers to the amount of control we are able to exert over our impulses and feelings. The degree of ego control ranges from under-controlled (in which we are unable to restrain any impulses and feelings) to over-controlled (in which we tightly inhibit the expression of our impulses). Both extremes are considered maladaptive.

Ego resiliency refers to our flexibility in adjusting or changing our typical level of ego control to meet the daily changes in our environment. Persons with little ego resiliency are referred to as "ego brittle," meaning they are unable to alter their level of ego control to meet challenges or difficult life situations. Those high in ego resiliency are flexible and adaptable, able to tighten or loosen their degree of ego control as the situation warrants.

Children who score low on measures of ego control are rated by their teachers as being more aggressive and less compliant and orderly than children who score high on ego control. Children who score high on ego resiliency are rated by their teachers as better able to cope with stress, lower in anxiety, and less in need of reassurance than children low in ego resiliency.

A study of 5-year-old children in the Netherlands found that those with low ego resiliency demonstrated physiological signs of greater stress during negative situations, typically interactions with their parents. Children high in ego resiliency did not exhibit such evidence of stress in similar situations (Smeekens et al., 2007).

High ego resiliency also correlated positively with general intelligence, good grades in school, popularity with peers, greater life satisfaction, and better social functioning. Low ego control in boys and girls, and low ego resiliency in girls, was related positively to drug abuse in adolescence. Thus, important aspects of personality and behavior can be linked to ego control and ego resiliency (Block & Block, 1980; Chuang et al., 2008; Hofer et al., 2010; Shiner, 1998).

Research with college students found that those low in ego control tended to be unpredictable, assertive, rebellious, moody, and self-indulgent. Those very high in ego control were described as bland, consistent, dependable, and calm. Students rated high in ego resilience were assertive, poised, socially skilled, and cheerful (Letzring et al., 2005).

A longitudinal study that periodically assessed these personality characteristics in American subjects ranging from 3 to 23 years old found that both ego control and ego resiliency were generally stronger later in life than in childhood, which makes sense developmentally. Individual differences in ego control were seen at various ages, suggesting that one's level of ego control could be identified early (Block & Block, 2006).

Research in Italy found a marked stability in ego resilience from ages 16 to 20 for both men and women. In contrast, studies in Sweden found that boys tended to become less ego resilient in adolescence while girls became more ego resilient. These results suggest the possibility of cultural and gender differences in ego resiliency (Chuang et al., 2006; Vecchione et al., 2010).

Finally, it probably will not surprise you to learn that ego resiliency is also related to positive mental health. Research in a variety of countries including the United States, Italy, Spain, Portugal, South Korea, and Pakistan, with participants ranging from college students to the elderly to amputee war veterans, showed clearly that those who score high in ego resiliency also score high in subjective well-being, extraversion, and agreeableness.

(Alessandri et al., 2012; Gunsung, 2013; Seaton, 2014; Zeb et al., 2013). This may have to do with the ability to cope with life difficulties. Consistent with that idea, research with mothers between the ages of 21 and 27 found that those who experienced their mothering as positive and satisfying had high ego resiliency (Paris & Helson, 2002). Mothers who considered their mothering experiences as negative were found to have lower ego resiliency. It could be that difficult life situations, setbacks and failures, or other negative experiences tend to lower ego resiliency, or it could be that people with higher ego resilience are better able to cope with those difficult life situations and make the best of them.

The Superego

The id and the ego do not represent Freud's complete picture of human nature. There is also a third set of forces—a powerful and largely unconscious set of dictates or beliefs—that we acquire in childhood: our ideas of right and wrong. In everyday language we call this internal morality a conscience. Freud called it the **superego**.

He believed that this moral side of the personality is usually learned by the age of 5 or 6 and consists initially of the rules of conduct set down by our parents. Through praise, punishment, and example, children learn which behaviors their parents consider good or bad. Those behaviors for which children are punished form the **conscience**, one part of the superego. The second part of the superego is the **ego-ideal**, which consists of good, or correct, behaviors for which children have been praised.

In this way, Freud believed, children learn a set of rules that earn either acceptance or rejection from their parents. In time, children internalize these teachings, and the rewards and punishments become self-administered. Parental control is replaced by self-control. We come to behave at least in partial conformity with these now largely unconscious moral guidelines. As a result of this internalization, we feel guilt or shame whenever we perform (or even think of performing) some action contrary to this moral code.

As the ultimate arbiter of morality, the superego is relentless, even cruel, in its constant quest for moral perfection. It never lets up. In terms of intensity, irrationality, and insistence on obedience, it is not unlike the id. Its purpose is not merely to postpone the pleasure-seeking demands of the id, as the ego does, but to inhibit them completely, particularly those demands concerned with sex and aggression.

The superego strives neither for pleasure (as the id does) nor for attainment of realistic goals (as the ego does). It strives solely for moral perfection. The id presses for satisfaction, the ego tries to delay it, and the superego urges morality above all. Like the id, the superego admits no compromise with its demands. In research with over 200 Iranian college students, the stronger people's superegos (measured by three subscales: conscience, guilty feelings, and self-blaming), the stronger their metacognition (cognitive-emotional awareness, unambiguity, and ability to plan; Oros et al., 2017).

The ego is caught in the middle, pressured by these insistent and opposing forces. Thus, the ego has a third master, the superego. To paraphrase Freud, the poor ego has a hard time of it, pressured on three sides, threatened by three dangers: the id, reality, and the superego. The inevitable result of this friction, when the ego is too severely strained, is the development of anxiety.

Anxiety: A Threat to the Ego

You already have a general idea of what the word *anxiety* means because you know how you feel when you're anxious about something. Anxiety is not unlike fear, but we may not know what we're afraid of. Freud described **anxiety** as an objectless fear, meaning that we cannot point to its source, to a specific object that caused it.

Freud made anxiety an important part of his personality theory, asserting that it is fundamental to the development of all neurotic and psychotic behavior. He suggested that the prototype of all anxiety is the birth trauma.

He argued that the fetus in its mother's womb is in the most stable and secure of worlds, where every need is satisfied without delay. But at birth, the organism is thrust into a hostile environment. Suddenly, it is required to begin adapting to reality because its instinctual demands may not always be immediately met. The newborn's nervous system, immature and ill-prepared, is bombarded with diverse sensory stimuli.

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superego To Freud, the moral aspect of personality; the internalization of parental and societal values and standards.

conscience A component of the superego that contains behaviors for which the child has been punished.

ego-ideal A component of the superego that contains the moral or ideal behaviors for which a person should strive.

anxiety To Freud, a feeling of fear and dread without an obvious cause.

Consequently, the infant engages in massive motor movements, heightened breathing, and increased heart rate. This birth trauma, with its tension and fear that the id instincts won't be satisfied, is our first experience with anxiety, according to Freud. From it, the pattern of reactions and feelings that will occur every time we are exposed to some threat in the future develops.

When we cannot cope with anxiety, when we are in danger of being overwhelmed by it, the anxiety is said to be traumatic. What Freud meant by this is that the person, regardless of age, is reduced to a state of helplessness like that experienced in infancy. In adult life, infantile helplessness is reenacted to some degree whenever the ego is threatened. Freud proposed three different types of anxiety: reality anxiety, neurotic anxiety, and moral anxiety.

Pause for Reflection

What morals are important to you and are part of your superego? How does your ego mediate between your moral conscience and your id?

Reality Anxiety

The first type of anxiety, the one from which the others are derived, is **reality anxiety** (or objective anxiety). This involves a fear of real dangers in the real world. Most of us justifiably fear fires, hurricanes, earthquakes, and similar disasters. We run from wild animals, jump out of the paths of speeding cars, and run out of burning buildings.

Reality anxiety serves the positive purpose of guiding our behavior to escape or protect ourselves from actual dangers. Our fear subsides when the threat is no longer present. These reality-based fears can be carried to extremes, however. The person who cannot leave home for fear of being hit by a car or who cannot light a match for fear of fire is carrying reality-based fears beyond the point of normality.

The insight that fear is primary in how we interact with the world has certainly been borne out empirically. Research (albeit outside the Freudian theoretical framework) suggests that stimuli that represent real physical threats, such as growling animals, guns, and snakes, are processed faster than other types of stimuli, even those that might be negative but won't hurt us right away (e.g., feces, rotten teeth, and decomposing animal carcasses; March et al., 2017, 2018), even outside of conscious awareness (March et al., 2022).

reality anxiety A fear of tangible dangers.

neurotic anxiety Anxiety that involves a conflict between id and ego.

moral anxiety Negative affect arising from conflict between id and superego.

Neurotic Anxiety

The other kinds of anxiety, neurotic anxiety and moral anxiety, are more consistently troublesome to our mental health. **Neurotic anxiety** has its basis in childhood, in a conflict between instinctual gratification and reality. Children are often punished for overtly expressing sexual or aggressive impulses. Therefore, the wish to gratify certain id impulses generates anxiety.

This neurotic anxiety is an unconscious fear of being punished for impulsively displaying id-dominated behavior. Note that the fear is not of the instincts themselves but of what might happen as a result of gratifying the instincts. The conflict becomes one between the id and the ego, and its origin has some basis in reality.

Research in Poland with patients with depressive and anxiety disorders, personality disorders or comorbid neurotic and personality disorders in a psychotherapy hospital has found that the less control patients feel they have over themselves (i.e., their emotions and cognitions), the worse their neurotic anxiety (Mostowik et al., 2018). Another study with the same patients found that neurotic anxiety was associated with viewing life events as negative experiences, especially in the past, and viewing life as hopeless (Mostowik et al., 2022).

Moral Anxiety

Moral anxiety results from a conflict between the id and the superego. In essence, it is a fear of one's conscience. When you are motivated to express an instinctual impulse that is contrary to your moral code, your superego retaliates by causing you to feel shame or guilt.

Moral anxiety is a function of how well developed the superego is. A person with a strong inhibiting conscience will experience greater conflict than a person with a less stringent set of moral guidelines. Like neurotic anxiety, moral anxiety has some basis in reality.

Children are punished for violating their parents' moral codes, and adults are punished for violating society's moral code. The shame and guilt feelings in moral anxiety arise from within; it is our conscience that causes the fear and the anxiety. Freud believed that the superego exacts a terrible retribution for violation of its tenets.

Moral anxiety can cause shifts in behavior. In a study of Dutch (Netherlander) college students, those with high levels of anxiety whose moral integrity was internally threatened (by thinking of a time when they acted against their morals), coped by paying attention to the eyes of happy and neutral faces, but avoided looking into the eyes of angry faces (Van Dillen et al., 2017). Chinese college students that experienced conflict between their ethical values and their belief that human nature is not good and one must act selfishly to succeed in the world (i.e., Machiavellianism) reported experiencing higher levels of anxiety when facing a moral decision than did people who did not experience such conflict (Tang & Li, 2021).

The Purpose of Anxiety

Anxiety serves as a warning to the person that something is amiss within the personality. Anxiety induces tension in the organism and thus becomes a drive (much like hunger or thirst) that the individual is motivated to satisfy. The tension must be reduced.

Anxiety alerts the individual that the ego is being threatened and that unless action is taken, the ego might be overthrown. Indeed, when personal goals, managed by the ego, cannot effectively be pursued and people disengage from them, they experience higher anxiety and depression until the ego can reengage with those goals, which brings life satisfaction (Verschuren & Douilliez, 2022). How can the ego protect or defend itself? There are a number of options: running away from the threatening situation, inhibiting the impulsive need that is the source of the danger, or obeying the dictates of the conscience. If none of these rational techniques works, the person may resort to defense mechanisms—the nonrational strategies designed to defend the ego.

Defenses Against Anxiety

We saw that anxiety is a signal that impending danger, a threat to the ego, must be counteracted or avoided. The ego has to reduce the conflict between the demands of the id and the strictures of society as represented by the superego. According to Freud, this conflict is ever-present because the instincts are always pressing for satisfaction, while the taboos of society are always working to limit such satisfaction.

Table 2.1 Some Freudian defense mechanisms

Repression	Involves unconscious denial of the existence of something that causes anxiety
Denial	Involves denying the existence of an external threat or traumatic event
Reaction Formation	Involves expressing an id impulse that is the opposite of the one truly driving the person
Projection	Involves attributing a problematic impulse to someone else
Regression	Involves retreating to an earlier, less frustrating period of life and displaying the childish and dependent behaviors characteristic of that more secure time
Rationalization	Involves reinterpreting behavior to make it more acceptable and less threatening
Displacement	Involves shifting id impulses from a threatening or unavailable object to a substitute object that is available
Sublimation	Involves altering or displacing id impulses by diverting instinctual energy into socially acceptable behaviors

Freud believed that the defenses must, to some extent, always be in operation. All behaviors are motivated by instincts; similarly, all behaviors are defensive in the sense of defending against anxiety. The intensity of the battle within the personality may fluctuate, but it never stops. Freud postulated several **defense mechanisms** (see Table 2.1) and noted that we rarely use just one; we typically defend ourselves against anxiety by using several at the same time. Also, some overlap exists among the mechanisms.

defense mechanisms Strategies the ego uses to defend itself against the anxiety provoked by conflicts of everyday life. Defense mechanisms involve unconscious denials or distortions of reality.

Although defense mechanisms vary in their specifics, they share two characteristics in common: (1) they are all denials or distortions of reality—necessary ones, but distortions nonetheless, and (2) they all operate unconsciously. We are unaware of them, which means that on the conscious level we hold distorted or unreal images of our world and ourselves.

Repression

Repression, which is the most fundamental and frequently used defense mechanism, is an involuntary removal of something from conscious awareness. It is an unconscious type of forgetting of the existence of something that brings us discomfort or pain. Repression can operate on memories of situations or people, on our perception of the present (so that we may fail to see some obviously disturbing event right in front of us), and even on the body's physiological functioning. For example, a man can so strongly repress the sex drive that he becomes impotent, Freud thought.

Once repression is operating, it is difficult to eliminate. Because we use repression to protect ourselves from danger, in order to remove it, we would have to realize that the idea or memory is no longer dangerous. But how can we find out that the danger no longer exists unless we release the repression, so we can once again be aware of the memory? The concept of repression is the basis of much of Freud's personality theory and is involved in all neurotic behavior.

Research has provided support for the Freudian defense mechanism of repression. In one study, people memorized two lists of words that were flashed on a screen. Some words on the lists were conceptually similar; for example, *cats* and *dogs* are both animals. The participants were then given an electric shock with some words on the first list. No shocks were administered with the words on the second list.

Then they were tested on how well they remembered the words. They tended to forget the words that had been accompanied by the shock but recalled those not accompanied by the shock. They also repressed words on the second list that were conceptually similar to the words on the first list that had been accompanied by a shock. The researchers concluded that the threatening words had been pushed out of conscious awareness (Glucksberg & King, 1967).

repression A defense mechanism that involves unconscious denial of the existence of something that causes anxiety.

A number of differences have been found between those of us who habitually repress bad experiences and memories and those who do not. It is not as though repressors are simply forgetful and have trouble remembering much of anything. Rather, they only have problems remembering specific experiences that they found negative, stressful, fearful, and traumatic (Saunders et al., 2014). Repressors have also been shown to be much more likely than nonrepressors to deny possessing personality traits they had identified as personally emotionally threatening, such as selfishness, laziness, rudeness, and dishonesty. Repressors also had fewer unpleasant or threatening emotional memories available for retrieval than did nonrepressors because they had repressed them (Newman et al., 1997; Newman & McKinney, 2002; Schimmack & Hartmann, 1997). Repressors tend to be low in anxiety and high in defensiveness and to have significantly poorer recall of negative memories from childhood (Davis, 1987; Myers & Derakshan, 2004). Perhaps to avoid the potential for emotional turmoil or because they control their emotions to such a great extent, repressors are far more likely to avoid romantic attachments than are nonrepressors (Davis, 1987; Vetere & Myers, 2002).

Repressors and nonrepressors have been compared on a number of experimental tasks. When some were shown pictures of neutral stimuli and pictures of embarrassing stimuli, the repressors avoided even looking at the embarrassing ones. When repressors were asked to free-associate to phrases with sexual or aggressive content, physiological measurements showed them to be highly emotionally aroused, yet their verbal responses gave no hint of anger or sexual arousal because they had repressed their emotional reactions. Nonrepressors did not inhibit their emotional reactions, and this was evident in their verbal responses (Davis, 1987).

In another study, repressors and nonrepressors were shown a grisly and disturbing film about animal mutation and lingering death from the effects of nuclear testing. When they were asked to recall a personal experience that made them happy, repressors remembered more pleasant events and thoughts than did nonrepressors. The researchers concluded that the repressors coped with the negative stimuli in the film by accessing positive memories. Thus, repressors did not experience to the same frequency and degree as nonrepressors the distressing emotional states engendered by the film. The repressors were not merely pretending to be unaffected; they had repressed the experience successfully (Boden & Baumeister, 1997).

Repression was also studied in two groups of children in the United States. Some of the children were healthy while others had cancer or other chronic debilitating illnesses. The sick children were more likely to be repressors and less likely to express anger than the healthy children (Phipps & Steele, 2002).

Denial

The defense mechanism of **denial** is related to repression and involves denying the existence of some external threat or traumatic event that has occurred. For example, a person with a terminal illness may deny the imminence of death. Parents of a child who has died may continue to deny the loss by keeping the child's room unchanged.

Reaction Formation

In **reaction formation**, we defend ourselves against a disturbing impulse by actively expressing the opposite impulse. For example, a person who feels threatened by sexual longings may become a rabid crusader against pornography. Someone who is disturbed by extreme aggressive impulses may become overly solicitous and friendly. Thus, lust becomes virtue and hatred becomes love, in the unconscious mind of the person using this mechanism.

Projection

Another way of defending against disturbing impulses is to project them onto someone else. This defense mechanism is called **projection**. Lustful, aggressive, and other unacceptable impulses are seen as being possessed by other people, not by oneself. The person says, in effect, "I don't hate him. He hates me." Or a mother may ascribe her sex drive to her adolescent daughter. The impulse is still manifested, but in a way that feels less threatening to the individual.

Research on projection—attributing one's negative traits and behaviors to someone else—has found that accusing another person of lying and cheating in a game increased the amount of blame placed on that person and reduced the amount of blame the subjects placed on themselves for showing the same negative behaviors (Rucker & Pratkanis, 2001). Adults who were of a higher social class as children are more likely to use projection than those who were raised in lower-class families (Cramer, 2009).

Projection can also influence our judgments about our spouses or partners. A study of unemployed job seekers found that they projected their feelings of depression about the stresses of unemployment onto their partners when asked to make everyday judgments about them. In addition, the more alike the partners were on a psychological measure of depression, the greater was the tendency for one to project that feeling when judging the other. The researchers noted: "Individuals seem more likely to assume that their spouses are like them when their spouses actually are like them" (Schul & Vinokur, 2000, p. 997). Thus, in this instance, the subjects were accurate in projecting their own characteristics onto their spouses or partners.

Regression

In **regression**, the person retreats or regresses to an earlier period of life that was more pleasant and free of the current level of frustration and anxiety. Regression usually involves a return to one of the stages of childhood development. The individual returns to this more secure time of life by behaving as they did at that time, such as being childish and dependent.

Rationalization

Rationalization is a defense mechanism that involves reinterpreting our behavior to make it seem more rational and therefore more acceptable. We excuse or justify a threatening thought or action by persuading ourselves that there is a rational explanation for it. The person who is fired from a job may rationalize by saying that they really didn't like the job anyway. The loved one who turns you down now appears to have many faults. It is less threatening to blame someone or something else for our failures than to blame ourselves.

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denial A defense mechanism that involves denying the existence of an external threat or traumatic event.

reaction formation A defense mechanism that involves expressing an id impulse that is the opposite of the one that is truly driving the person.

projection A defense mechanism that involves attributing a problematic impulse to someone else.

regression A defense mechanism that involves retreating to an earlier, less frustrating period of life and displaying the usually childish behaviors characteristic of that more secure time.

rationalization A defense mechanism that involves reinterpreting the situation to make it more acceptable and less threatening to us.

Displacement

If an object that satisfies an id impulse is not available, the person may shift the impulse to another object. This is known as **displacement**. For example, children who hate their parents or adults who hate their bosses, but are afraid to express their hostility for fear of being punished, may displace the aggression onto someone else—usually someone who is less likely to fight back or retaliate.

The child may hit a younger brother or sister, or the adult may shout at the dog. In these examples, the original object of the aggressive impulse has been replaced by an object that is not a threat. However, the substitute object will not reduce the tension as satisfactorily as the original object would. If you are involved in a number of displacements, a reservoir of undischarged tension accumulates, and you will be increasingly driven to find new ways of reducing that tension.

A meta-analysis of 97 research studies supported the contention that displaced aggression is a viable and reliable phenomenon. The analysis found that the more negative and stressful the setting or context in which displacement occurs, the greater the intensity of that displacement (Marcus-Newhall et al., 2000).

A study with college students found that those in a group that was experimentally provoked to anger, and then left to spend 25 minutes focusing their attention on their angry thoughts and feelings, were far more likely to demonstrate displaced aggression than those whose experimental condition did not include the 25 minutes of brooding. The researchers concluded that dwelling on our anger maintains the feeling and is likely to cause it to be expressed outwardly in aggressive behavior (Bushman et al., 2005).

Sublimation

Whereas displacement involves finding a substitute object to satisfy id impulses, **sublimation** involves altering the id impulses themselves. The instinctual energy is thus diverted into other channels of expression, ones that society considers acceptable and admirable. Sexual energy, for example, can be diverted or sublimated into artistically creative behaviors.

Freud believed that a variety of human activities, particularly those of an artistic nature, are manifestations of id impulses that have been redirected into socially acceptable outlets. As with displacement (of which sublimation is a form), sublimation is a compromise. As such, it does not bring total satisfaction and leads to a buildup of undischarged tension.

As we have discussed, these defense mechanisms are unconscious denials or distortions of reality. We are lying to ourselves when we use these defenses, but we are not aware of doing so. If we knew we were lying to ourselves, the defenses would not be so effective. If the defenses are working well, they keep threatening or disturbing material out of our conscious awareness. As a result, we may not know the truth about ourselves. We may have a distorted perception of our needs, fears, and desires.

There are situations in which the truth about ourselves emerges, when our defenses break down and fail to protect us. This occurs in times of unusual stress (or when undergoing psychoanalysis). When the defenses fail, we are stricken with overwhelming anxiety. We may feel dismal, worthless, and depressed. Unless the defenses are restored or new ones formed to take their place, we are likely to develop neurotic or psychotic symptoms. Thus, according to Freud, defenses are necessary to our mental health. We could not survive long without them.

Further research supports the idea, in a more modern form, that defense mechanisms are implemented to help deal with anxiety. For example, in a Polish sample of patients high in neurotic anxiety, people were especially likely to use denial, repression, and rationalization (Mostowik et al., 2022). As another example, in a study of American women who had a traumatic experience giving birth to children, qualitative analyses suggest that women used repression to keep memories of the childbirth out of mind and sublimated their negative emotions into good mothering energy, which may have been somewhat helpful (Fenech & Thomson, 2015). They also engaged in reaction formation, displacement, and regression, which were less helpful insofar as they were less able to put energy into positive parenting and more likely to express anger toward their children and partners. As an example in a different stressful context, researchers in Pakistan found in a study of over 400 medical school students that those who implemented "mature" defense mechanisms (e.g., sublimation, suppression) to manage their anxiety and

displacement A defense mechanism that involves shifting id impulses from a threatening object or from one that is unavailable to an object that is available.

sublimation A defense mechanism that involves altering or displacing id impulses by diverting instinctual energy into socially acceptable behaviors.

depression did so better and also had better academic performance (Waqas et al., 2015). For healthcare workers at the front line of the COVID-19 pandemic in Italy, those mature defense mechanisms helped maintain psychological well-being (lower stress and emotional exhaustion), whereas "immature" defense mechanisms (e.g., displacement, denial, projection) were associated with worse psychological well-being (Di Giuseppe et al., 2021).

A Hierarchy of Defense Mechanisms

Studies have found a hierarchy among the Freudian defense mechanisms in which the simpler ones are used earlier in life and the more complex ones emerge as we grow older. For example, denial, which is a simple, low-level defense mechanism, is used mostly by young children and less often by adolescents. Identification, a more complex defense mechanism—imitating a person with power over them—is used considerably more by adolescents than by younger children. Denial is also used more frequently by boys. Girls (ages 4 to 9) are more likely to use the more complex mechanisms of regression, displacement, and reaction formation (Tallandini & Caudek, 2010).

In research with students from grades 2, 5, 8, 11, and first-year college classes, responses to the Thematic Apperception Test pictures supported the notion of clear age differences in defense mechanisms. The use of denial and projection decreased with age, whereas identification increased with age (Porcerelli et al., 1998). A longitudinal study of 150 students ages 11 to 18 found that the projection and identification defenses were used more often than denial, and that their use increased from early to late adolescence (Cramer, 2007).

A longitudinal study of people who were first tested in nursery school and later at age 23 found a link between preschool personality and the use of denial as young adults. As we noted earlier, denial tends to be used as a defense mechanism mostly by children, and its use typically declines with age. In this study, however, men who at age 23 were still using denial had a number of psychological problems that had been identified when they were in nursery school. Their childhood personalities were high in emotional immaturity and unworthiness and low in personal competence and ego resiliency. For women, no such clear relationship was found between childhood personality and the continued use of denial at age 23 (Cramer & Block, 1998). It could be that girls are better prepared by society to cope with their stress and emotions than are boys, who must rely on denial.

A study of American adults found that the use of displacement and regression as defense mechanisms decreased from adolescence to early old age in the mid-60s. People older than that, however, reverted to the more maladaptive defenses they had used when they were younger (Diehl et al., 2014).

Two studies conducted in Canada demonstrated that adolescent girls with anorexia nervosa (an eating disorder), and older women who had been victims of spouse abuse, were far more likely to use denial as a coping mechanism than were girls or women who were not in these categories. The researchers suggested that by unconsciously denying their difficulties, the girls and women were attempting to minimize or distance themselves from their situations (Arokach, 2006; Couturier & Lock, 2006).

A study of adult men found that those who tried to protect themselves from feelings of weakness by being more powerful and competitive and avoiding emotional expression tended to use more immature defense mechanisms. Those men who did not feel a strong need to be more powerful than others and who could express their emotions more freely used more mature defense mechanisms (Mahalik et al., 1998).

The notion of defense mechanisms was proposed and developed in a European setting from studies of White middle-class patients. Much of the research conducted on defense mechanisms was done with American or European participants. Thus, it is important to also do research outside of the Western context to understand to what extent insights about defense mechanisms are generalizable to other people and cultures. In a study with Americans and Asian Buddhists living in Thailand, researchers found a strong similarity between people in the two cultures in their use of regression, reaction formation, projection, repression, denial, and compensation (Tori & Bilmes, 2002). Later research on college students in China diagnosed with borderline personality disorders showed that they used more immature defense mechanisms than students without such disorders (Xiang et al., 2010). Thus, these initial findings suggest that defense mechanisms may be used similarly across Western and Eastern cultures, but more research should be done.

Pause for Reflection

What defense mechanisms do you and those around you tend to use? Do they help alleviate anxiety or make it worse?

The Freudian Slip

According to Freud, what appears to be ordinary forgetting or a casual lapse in speech is actually a reflection of unconscious motives or anxieties. In research to test this phenomenon, two groups of men were shown the same pairs of words flashed on a computer screen (Motley, 1985). When a buzzer sounded, they were asked to say the words aloud. One group had electrodes attached to their bodies; they were told that during the experiment they would receive a painful electric shock. This situation was an experimental way of engendering anxiety. In the second group, the experimenter was an attractive, sexy woman. This group was given a test of sexual anxiety.

Men anxious about the electric shock made verbal slips such as *damn shock* when the words on the screen were *sham dock.* Those in the sexual anxiety condition revealed that anxiety in verbal slips such as *nude breasts* for *brood nests.* Those who scored high on the sexual anxiety test made the greatest number of sex-related Freudian slips.

Men in a control group exposed to the same words but to neither anxiety-arousing condition did not make verbal slips. Not all lapses in speech are Freudian slips, of course, but research suggests that at least some may be what Freud said they were—hidden anxieties revealing themselves in embarrassing ways.

One American president, George W. Bush, speaking before a teacher's group, said "I'd like to spank all teachers." Clearly he meant to say that he wanted to *thank* all teachers. Another well-known American politician, Senator Ted Kennedy, said he wanted to encourage "the breast," when referring to "the best and the brightest" (quoted in Pincott, 2013). Do you think these might have been Freudian slips?

Catharsis

To Freud, catharsis involved the physical expression of an emotion by recalling a traumatic event, which often led to relief of the disturbing symptom. In popular culture, the term *catharsis* has come to refer to expressing one's emotion as a way of reducing hostility and aggression. Self-help books urge us to give vent to anger by taking it out on some inanimate object—beating a pillow, breaking a dish, or hitting a punching bag. Does this work? Does acting out aggressions reduce negative emotions? The answer is no.

In one study of catharsis, two groups of college students were exposed to messages that either supported or disputed the notion that cathartic behavior is a good way to relieve anger. Next, some of the students were experimentally provoked to anger; an essay they had written was severely criticized. They were told that their paper was one of the worst essays ever written.

Students who were thus provoked and who had read the pro-catharsis message were significantly more prone to act out their aggression by hitting a punching bag. In a second experiment, those who received the pro-catharsis message not only hit the punching bag but also behaved aggressively toward the person who had annoyed them by criticizing their writing. They even displayed heightened aggression toward innocent people who had played no role in promoting their anger.

So, hitting the punching bag had not been cathartic. It had not dissipated their anger but might even have increased it (Bushman et al., 1999). Other research confirmed that venting anger served to increase the likelihood of expressing more anger and did not reduce negative emotions (Bushman, 2002; Lohr et al., 2007). In other work, researchers found that people who believed venting anger was good for them were more attracted to violent video games than were those who did not believe in the value of catharsis (Bushman & Whitaker, 2010).

Psychosexual Stages of Personality Development

Freud believed that all behaviors are defensive but that not everyone uses the same defenses in the same way. All of us are driven by the same id impulses, but there is not the same universality in the nature of the ego and superego. Although these structures of the personality perform the same functions for everyone, their content varies from one person to another. They differ because they are formed through experience, and no two people have precisely the same experiences, not even siblings raised in the same house.

Thus, part of our personality is formed on the basis of the unique relationships we have as children with various people and objects. We develop a personal set of character attributes, a consistent pattern of behavior that defines each of us as an individual.

Growing Up Is Not Easy

Freud argued that a person's unique character type develops in childhood, largely from parent–child interactions. The child constantly tries to maximize pleasure by satisfying the id demands, while

parents, as representatives of society, try to impose the demands of reality and morality. So important did Freud consider childhood experiences that he said the adult personality was firmly shaped and crystallized by the age of 5.

What persuaded him that these early years are so crucial were his own childhood memories along with the memories revealed by his adult patients. Invariably, as his patients lay on his psychoanalytic couch, they reached far back into their childhoods. Increasingly, Freud perceived that the adult neurosis had been formed in the early years of life.

Freud also sensed strong sexual conflicts in the infant and young child, conflicts that seemed to revolve around specific regions of the body. He noted that each body region assumed a greater importance as the center of conflict at a different age. From these observations he derived his theory of the **psychosexual stages of development**; each stage is defined by an erogenous zone of the body (refer to Table 2.2). In each developmental stage a conflict exists that must be resolved before the infant or child can progress to the next stage.

Sometimes a person is reluctant or unable to move from one stage to the next because the conflict has not been resolved, or because the needs have been so supremely satisfied by an indulgent parent that the child doesn't want to move on. In either case, the individual is said to be fixated at this stage of development. In **fixation**, a portion of libido or psychic energy remains invested in that developmental stage, leaving less energy for the following stages.

Central to the psychosexual theory is the infant's sex drive. Freud shocked his colleagues and the general public when he argued that babies are motivated by sexual impulses. Recall, however, that Freud did not define sex in a narrow way. He believed that the infant is driven to obtain a diffuse form of bodily pleasure deriving from the mouth, anus, and genitals, the erogenous zones that define the stages of development during the first 5 years of life.

Table 2.2 Freud's psychosexual stages of development

Oral	Birth–1	Mouth is the primary erogenous zone; pleasure derived from sucking: id is dominant.
Anal	1–3	Toilet training (external reality) interferes with gratification received from defecation.
Phallic	4–5	Incestuous fantasies; Oedipus complex; anxiety; superego development.
Latency	5–Puberty	Period of sublimation of sex instinct.
Genital	Adolescence–Adulthood	Development of sex-role identity and adult social relationships.

The Oral Stage: Taking In or Spitting Out

The oral stage, the first stage of psychosexual development, lasts from birth until some time during the second year. During this period, the infant's principal source of pleasure is the mouth. The infant derives pleasure from sucking, biting, and swallowing. Of course, the mouth is obviously used for survival—for the ingestion of food and water—but Freud placed a greater emphasis on the erotic satisfactions derived from oral activities.

During this stage, the infant is totally dependent on the mother or caregiver who becomes the primary object of the child's libido. In more familiar terms, we might say the infant is learning, in a primitive way, to love the mother. How the mother responds to the infant's demands, which at this time are solely id demands, determines the nature of the baby's small world. The infant learns from the mother to perceive the world as either a good or bad, satisfying or frustrating, safe or perilous place to be.

There are two ways of behaving during this stage: oral incorporative behavior (taking in) and oral aggressive or oral sadistic behavior (biting or spitting out). The oral incorporative mode occurs first and involves the pleasurable stimulation of the mouth by other

psychosexual stages of development To Freud, the oral, anal, phallic, and genital stages through which all children pass. In these stages, gratification of the id instincts depends on the stimulation of corresponding areas of the body.

fixation A condition in which a portion of libido remains invested in one of the psychosexual stages because of excessive frustration or gratification, such that the person cannot move to the next developmental phase.

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In the oral stage of psychosexual development, pleasure is derived from sucking, biting, and swallowing.

people and by food. Adults fixated at the oral incorporative stage become excessively concerned with oral activities, like eating, drinking, smoking, and kissing.

If, as infants, they were excessively gratified during this stage, their adult oral personality will be predisposed to a high degree of optimism and dependency. Because they were overindulged in infancy, they continue to depend on and expect others to gratify their needs. As a consequence, they become overly gullible, swallow or believe anything they are told, and trust other people inordinately. To label this cluster of traits, Freud used the term "oral passive personality types".

The second oral behavior, oral aggressive or oral sadistic, occurs during the painful, frustrating eruption of teeth. As a result of this experience, infants come to view the mother with hatred as well as love. After all, she has been responsible for everything in the infant's life so far, so she must also be responsible for the pain.

Those who become fixated at this level are prone to excessive pessimism, hostility, and aggressiveness. They are likely to be argumentative and sarcastic, making so-called biting remarks and displaying cruelty toward others. They tend to be envious of other people and try to exploit and manipulate them in an effort to dominate them.

The oral stage concludes at the time of weaning, although some libido remains if fixation has occurred. Then the infant's focus shifts to the other end.

An investigation of the oral personality type showed a strong relationship between the oral orientation, as identified by the Rorschach test, and obesity (Masling, Rabie, & Blondheim, 1967). This supports Freud's contention that oral types are preoccupied with eating and drinking. Another study found oral personality types to be more conforming to the suggestions of an authority figure than anal personality types (Tribich & Messer, 1974). According to Freud, oral personalities are dependent and submissive and should be more conforming than anal personalities; anal types tend to be hostile and can be expected to resist conformity. Freud also contended that women were more orally dependent than men were, but later research found no such difference between the men and women (O'Neill & Bornstein, 1990).

The Anal Stage: Letting Go or Holding Back

Society, in the form of parents, tends to defer to the infant's needs during the first year of life, adjusting to their demands and expecting relatively little adjustment in return. This situation changes dramatically around the age of 18 months, when a new demand, toilet training, is made of the child. Freud believed that the experience of toilet training during the anal stage had a significant effect on personality development.

Defecation produces erotic pleasure for the child, but with the onset of toilet training, the child is put under pressure to learn to postpone or delay this pleasure. For the first time, gratification of an instinctual impulse is interfered with as parents attempt to regulate the time and place for defecation.

As any parent can attest, this is a time of conflict for everybody. Children learn that they have a weapon that can be used against their parents. The child has control over something and can choose to comply or not with the parents' demands. If the toilet training is not going well—for example, if the child has difficulty learning or the parents are excessively demanding—the child may react in one of two ways.

One way is to defecate whenever and wherever the parents don't want them to, thus defying their attempts at regulation. Children who find this a satisfactory technique for reducing frustration and use it frequently may develop an anal aggressive personality. To Freud, this was the basis for many forms of hostile and sadistic behavior in adult life, including cruelty, destructiveness, and temper tantrums. Such a person is likely to be disorderly and to consider other people as objects to be possessed.

A second way the child may react to the frustration of toilet training is to hold back or retain the feces. This produces a feeling of erotic pleasure (derived from a

full lower intestine, Freud said) and can be another successful technique for manipulating the parents. They may become worried, even frantic, if the child goes days without a bowel movement. Thus, the child discovers a new method for securing parental attention and affection.

This behavior is the basis for the development of an anal-retentive personality. Such a person becomes stubborn and stingy, and hoards or retains things because feelings of security depend on what is saved and possessed, and on the order in which possessions and other aspects of life are maintained. The anal-retentive person is likely to be rigid, compulsively neat, obstinate, and overly conscientious. In general, then, there is some research support both for the oral and anal personality types (Westen, 1998). It has been suggested that Freud's anal character keeps resurfacing or recycling in psychology under different names, such as conscientiousness, orderliness, obstinacy, and the obsessive-compulsive personality disorder (Haslam, 2011).

The Phallic Stage

A new set of problems arises around the fourth to fifth year, when the focus of pleasure shifts from the anus to the genitals. Again, the child faces a battle between an id impulse and the demands of society, as reflected in parental expectations.

Children at the phallic stage display considerable interest in exploring and manipulating the genitals, their own and those of their playmates. Pleasure is derived from the genital region not only through behaviors such as masturbation but also through fantasies. The child becomes curious about birth and about why boys have penises and girls do not. The child may talk about wanting to marry the parent of the opposite sex. Of course, Freud failed to take into account the complexities of development in the cases of, for example, gay, trans, or nonbinary children.

The phallic stage is the last of the pregenital or childhood stages, and phallic conflicts are the most complex ones to resolve. They are also difficult for many people to accept because they involve the notion of incest, a taboo in many cultures. Between incestuous desires and masturbation, we can observe the seeds of shock, anger, and suppression being sown in the parents of the typical 4-year-old. Reality and morality come to grips with the evil id once again. There is little empirical evidence for the phallic personality type.

The Oedipus Complex in Boys The basic conflict of the phallic stage centers on the unconscious desire of the child for the parent of the opposite sex. Accompanying this is the unconscious desire to replace or destroy the parent of the same sex. Out of Freud's identification of this conflict came one of his best-known concepts: the **Oedipus complex**. Its name comes from the Greek myth described in the play *Oedipus Rex,* written by Sophocles in the fifth century BCE. In this story, young Oedipus kills his father and marries his mother, not knowing who they are.

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The boy comes to resolve the Oedipus complex by identifying with his father.

The Oedipus complex operates differently for boys and girls; Freud developed the male part of the complex more fully. In the Oedipus complex, the mother becomes a love object for the young boy. Through fantasy and overt behavior, he displays his sexual longings for her. However, the boy sees the father as an obstacle in his path and comes to look upon him as a rival and a threat.

He also perceives that the father has a special kind of relationship with the mother in which he, the boy, is not allowed to participate. As a result, he becomes jealous of and hostile toward the father. Freud drew his formulation of the Oedipus complex from his own childhood experiences. He wrote, "I have found love of the mother and jealousy of the father in my own case, too" (Freud, 1954, p. 223).

Accompanying the boy's desire to replace his father is the fear that the father will retaliate and harm him. He interprets his fear of his father in genital terms, becoming fearful that his father will cut off the offending organ (the boy's penis), which is the source of the

Oedipus complex During the phallic stage (ages 4–5), the unconscious desire of a boy for his mother, accompanied by a desire to replace or destroy his father.

boy's pleasure and sexual longings. And so **castration anxiety**, as Freud called it, comes to play a role, as it may have done in Freud's childhood. "There are a number of indications that [Freud's father] enjoined little Sigmund not to play with his genitals, and even threatened him with castration if he did" (Krüll, 1986, p. 110).

Additional evidence to support this contention comes from Freud's later writings on masturbation, in which he saw such threats from fathers as common. Freud also reported that his adult dreams contained material relating to the fear of castration by his father.

Two other childhood events may have reinforced Freud's fear of castration. At around the age of 3, while playing with a young female relative, he discovered she did not have a penis. For a 3-year-old boy, this may have been enough evidence to prove that penises can be cut off. In the opinion of one biographer, "the threat of castration is particularly realistic to a Jewish boy, since it is easy to establish a connection between ritual circumcision and castration" (Krüll, 1986, p. 110). Freud confirmed this in his later writings.

So strong is the boy's fear of castration that he is forced to repress his sexual desire for his mother. To Freud, this was a way of resolving the Oedipal conflict. The boy replaces the sexual longing for the mother with a more acceptable affection and develops a strong identification with the father. In doing that, the boy experiences a degree of vicarious sexual satisfaction. To enhance the identification, he attempts to become more like his father by adopting his mannerisms, behaviors, attitudes, and superego standards.

Although there is little research support for the importance of identification with the father to lessen the conflict of Oedipus complex in boys, there is some research on how men's relationships with their mothers affect them. For example, in a research study in the Philippines, boys in high school who had very high attachments to their mothers experienced more attachment anxiety in their romantic relationships (Oros et al., 2019). Castration anxiety also may not be a real phenomenon according to empirical work: in a study of over 200 college men, there were no differences in anxiety or depression levels based on at what age or psychosexual stage the boy was circumcised (Kıvrak, 2018).

castration anxiety A boy's fear during the Oedipal period that his penis will be cut off that represents fear of retaliation from his father.

Electra complex During the phallic stage (ages 4–5), the unconscious desire of a girl for her father, accompanied by a desire to replace or destroy her mother.

penis envy The envy the female feels toward the male because the male possesses a penis; this is accompanied by a sense of loss because the female does not have a penis.

The Oedipus Complex in Girls

Freud was less clear about the female phallic conflict, which some of his followers termed the **Electra complex**. The name was derived from another family story by Sophocles in which Electra persuades her brother to kill their mother, whom she hated.

According to Freud, a girl's first object of love, like the boy's, is the mother, because she is the primary source of food, affection, and security in infancy. During the phallic stage, however, the father becomes the girl's new love object. Why does this shift from mother to father take place? Freud said it was because of the girl's reaction to her discovery that boys have a penis and girls do not.

The girl blames her mother for her supposedly inferior condition and consequently comes to love her mother less. She may even hate the mother for what she imagines the mother did to her. She comes to envy her father and transfers her love to him because he possesses the highly valued sex organ. Freud wrote: "Girls feel deeply their lack of a sexual organ that is equal in value to the male one; they regard themselves on that account as inferior and this envy for the penis is the origin of a whole number of characteristic feminine reactions" (Freud, 1925, p. 212). Thus, a girl develops **penis envy**, which is a counterpart to a boy's castration anxiety. She believes she has lost her penis; he fears he will lose his.

This female Oedipus complex, Freud suggested, can never be totally resolved, a situation he believed led to poorly developed superegos in women. Freud wrote that an adult woman's love for a man is always tinged with penis envy, for which she can partially compensate by having a male child. The girl comes to identify with the mother and repress her love for her father, but Freud was not specific about how this occurs.

Most psychological research leads to the conclusion that there is no validity at all to Freud's concept of the Oedipus complex (Kupfersmid, 1995). However, there have been a number of studies dealing with the behavior and attitudes of children toward parents of the same and opposite sex, which is a major ingredient of Freud's notion of the Oedipal relationship.

For example, parents of boys and girls ages 3 to 6 were asked to record affectionate behaviors and

aggressive or hostile behaviors their children directed toward them. The results demonstrated that acts of affection toward the parent of the opposite sex and aggression toward the parent of the same sex occurred much more frequently than the reverse. These types of Oedipal-related behaviors were greatest around age 4 and began to decline by age 5 (Watson & Getz, 1990). A classic study found that significantly more men reported dreams reflecting castration anxiety; significantly more women reported dreams reflecting castration wishes or penis envy (Hall & Van de Castle, 1965).

Freud proposed that penis envy in girls leads them to view the father as a love object, a desire later supplanted by the wish for a baby. In an experimental test of this proposal, college-age women were exposed to subliminal messages containing pregnancy themes. Their later responses on an inkblot test were found to contain significantly more phallic imagery than the responses of women in the control group or of college-age men exposed to the same stimuli. The researchers claim that these results support Freud's belief that pregnancy has phallic significance for women (Jones, 1994).

A study conducted in Wales of boys and girls ages 12 to 14 assessed their attitudes toward their parents. The results showed that children who were ambivalent toward their fathers (who viewed them with a mixture of both love and hatred) displayed a less secure attachment toward other people than did children who did not feel ambivalent about their fathers. The researchers noted that this finding supports Freud's insistence on the importance of the father in influencing the child's later relationships (Maio et al., 2000).

The Phallic Personality Phallic conflicts and their degree of resolution are of major importance in determining adult relations with the opposite sex. Poorly resolved conflicts can cause lingering forms of castration anxiety and penis envy. The so-called phallic character or personality type evidences strong narcissism.

Although continually acting in ways to try to attract the opposite sex, they have difficulty establishing mature heterosexual relationships. They need constant recognition and appreciation of what they see as their attractive and unique qualities. As long as they receive such support they function well, but when it is lacking they feel inadequate and inferior.

Freud described the male phallic personality as brash, vain, and self-assured. Men with this personality may try to assert or express their masculinity through repeated sexual conquests. The female phallic personality, motivated by penis envy, exaggerates her femininity and may use her talents and charms to overwhelm and conquer men.

The tense drama of the phallic stage is repressed in all of us, according to Freud. Its effects motivate us as adults at the unconscious level, and we remember very little, if anything, about the conflict.

Age and Personality Development Freud proposed that personality was formed by about the age of 5 and was subject to little change after that. However, research on personality development over time indicates that the personality characteristics of preschool children changed dramatically, as shown by follow-up studies conducted over 6 to 7 years (Kagan et al., 1978). Other studies suggest that the middle childhood years (ages 7–12) may be more important in establishing adult personality patterns than the early childhood years.

A review of the scientific research literature concluded that personality appears to depend more on temperament and experiences in later childhood than on early parent–child interactions, as Freud had suggested (Kagan, 1999). Nonetheless, there is no denying that experiences during our first 5 years of life affect our personality in a big way (Belsky et al., 2012; Doom et al., 2016; Simpson et al., 2012; Szepsenwol et al., 2017). It's just that the years after that also matter.

The Latency Period

The storms and stresses of the oral, anal, and phallic stages of psychosexual development form the basic material out of which most of the adult personality is shaped. The three major structures—the id, ego, and superego—have been formed by around the age of 5, and the relationships among them are being solidified.

Fortunately, because the child and parents certainly could use some rest, the next 5 or 6 years are quiet. The **latency period** is not a psychosexual stage of development. The sex instinct is dormant during this time, Freud believed, and is temporarily sublimated in school activities, hobbies, and sports and in developing friendships with members of the same sex.

The Genital Stage

The genital stage, the final psychosexual stage of development, begins at puberty. The body is becoming

latency period To Freud, the period from approximately age 5 to puberty, during which the sex instinct is dormant, sublimated in school activities, sports, and hobbies, and in developing friendships with members of the same sex.

physiologically mature, and if no major fixations have occurred at an earlier stage of development, the individual may be able to lead a normal life. Freud believed that the conflict during this period is less intense than in the other stages. The adolescent must conform to societal sanctions and taboos that exist concerning sexual expression, but he believed that conflict is minimized through sublimation.

The sexual energy pressing for expression in the teenage years can be at least partially satisfied through the pursuit of socially acceptable substitutes and, later, through a committed adult relationship. The genital personality type is able to find satisfaction in love and work, the latter being an acceptable outlet for sublimation of the id impulses.

Pause for Reflection

Thinking about yourself, family, friends, and others as children, what do you think Freud's theory of development is missing?

Questions About Human Nature

Freud did not present us with a flattering or optimistic image of human nature. Quite the opposite. He argued that each person is a dark cellar of conflict in which a battle is continually raging. Human beings are depicted in gloomy, pessimistic terms, condemned to a struggle with our inner forces, which we are almost always destined to lose. Doomed to anxiety, to the thwarting of at least some of our driving impulses, we experience continuing tension and conflict. We are endlessly defending ourselves against the forces of the id, which stand ever alert to topple us. Not a happy prospect.

In Freud's system, there is only one ultimate and necessary goal in life: to reduce tension. On the nature–nurture issue, Freud adopted a middle ground. The id, the most powerful part of the personality, is an inherited, physiologically based structure, as are the stages of psychosexual development. However, other parts of our personality are learned in early childhood, from parent–child interactions.

Although Freud recognized universality in human nature, in that we all pass through the same stages of psychosexual development and are motivated by the same id forces, he asserted that part of the personality is unique to each person. The ego and superego perform the same functions for all of us, but their content varies from one person to another because they are formed through personal experience. Also, different character types can develop during the psychosexual stages.

On the issue of free will versus determinism, Freud held a deterministic view: Virtually everything we do, think, and even dream is predetermined by the life and death instincts, the inaccessible and invisible forces within us. Our adult personality is determined by interactions that took place before we were 5, at a time when we had limited control. These experiences forever hold us in their grip.

Freud also argued, however, that people who undergo psychoanalysis could achieve the ability to exercise increased free will and take responsibility for their choices. "The more the individual is able to make conscious what had been unconscious, the more he or she can take charge of his or her own life" (Solnit, 1997, p. 66). Thus, Freud suggested that psychoanalysis had the potential to liberate people from the constraints of determinism.

Freud's overall picture of human nature, painted in these bleak hues, reflects his own personal view of humanity, which darkened with age and declining health. His judgment of people in general was harsh. "I have found little that is 'good' about human beings on the whole. In my experience, most of them are trash" (Freud, 1963, pp. 61–62). We can see this stern judgment of us in his personality theory.

Assessment in Freud's Theory

Freud considered the unconscious to be the major motivating force in life. It is the repository of all of our childhood conflicts which have been repressed out of conscious awareness. The goal of Freud's system of psychoanalysis was to bring those repressed memories, fears, and thoughts back into conscious awareness. How can the psychoanalyst evaluate, assess, or even find this invisible portion of the mind, this dark arena that is otherwise inaccessible to us? Over the course of his work with patients, Freud developed two methods of assessment: free association and dream analysis.

Both of these Freudian assessment techniques—free association and dream analysis—reveal to the psychoanalyst a great deal of repressed material, but all of it is in disguised or symbolic form. The therapist then must interpret or translate the material for the patient. Freud compared this procedure with the task of an archeologist reconstructing a community that has been destroyed and buried under the accumulation of centuries. Just as the archeologist attempts to reconstruct a building from broken fragments, so a psychoanalyst reconstructs an experience from buried, fragmented

memories. Thus, the evaluation or assessment of a patient's personality, the uncovering of their unconscious conflicts, depends on the skill, training, and experience of the analyst.

Free Association

Freud's development of the technique of **free association** owes much to Josef Breuer, a Viennese physician who befriended Freud during Freud's early years in private practice. In treating a young woman who showed symptoms of hysteria, Breuer found that hypnotizing her enabled her to remember repressed events. Recalling the events—reliving the experiences—brought relief from the disturbing symptoms.

Freud then started using hypnosis with some degree of success and called the process **catharsis**, from the Greek word for purification. However, he later abandoned hypnosis, partly because he had difficulty hypnotizing some of his patients. Also, some patients revealed disturbing events during hypnosis but were unable to recall them when he questioned them later.

Looking for a technique other than hypnosis for helping a patient recall repressed material, Freud asked patients to lie on a couch while he sat behind it, out of sight. His reason for staying out of sight and hidden from the patients was both personal and professional. "I cannot put up with being stared at by people for eight hours a day or more," he wrote. Also, "Since while I am listening to the patient, I too give myself over to the current of my unconscious thoughts, I do not want with my expressions of face to give the patient the material for interpretations or to influence him in what he tells me" (quoted in Lingiardi & De Bei, 2011, p. 301).

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Freud's psychanalytic couch is on display at the Freud Museum in London.

Freud encouraged his patients to relax and concentrate on events in the past. They were supposed to engage in a kind of daydreaming out loud, saying whatever came to mind. Patients were told to express spontaneously every idea and image exactly as it occurred, no matter how trivial, embarrassing, or painful the thought or memory might seem. The memories were not to be omitted, rearranged, or restructured.

Freud believed there was nothing random about the information uncovered during free association and that it was not subject to a patient's conscious choice. The material revealed by patients in free association was predetermined, forced on them by the nature of their conflict.

Free Association Is Not Always so Free

Freud also found that sometimes the technique did not operate so freely. Some experiences or memories were evidently too painful to talk about, and the patient would be reluctant to disclose them. Freud called these moments **resistances**. He believed they were significant because they indicated that the analysis was getting close to the source of the patient's problems. Resistance is a sign that the treatment is heading in the right direction and that the analyst should continue to probe in that area. Part of the psychoanalyst's task is to break down or overcome resistances so the patient can confront the repressed experience.

Free association is a method still used today, usually with more focused goals. Free association methods have been used to understand, for example, how people relate the self to the whole world (Kuška et al., 2016), crave meat based on how familiar the food product is or how much it resembles the animal (Possidónio et al., 2022), and respond to low doses of LSD (lysergic acid diethylamide, a psychedelic drug; Wießner et al., 2022).

Dream Analysis

Freud believed that dreams represent, in symbolic form, repressed desires, fears, and conflicts. So strongly

free association A technique in which the patient says whatever comes to mind. In other words, it is a kind of daydreaming out loud.

catharsis The expression of emotions that is expected to lead to the reduction of disturbing symptoms.

resistance In free association, a blockage or refusal to disclose painful memories.

have these feelings been repressed that they can surface only in disguised fashion during sleep.

He argued that there were two aspects of dreams: the manifest content, which refers to the actual events in the dream; and the latent content, which is the hidden symbolic meaning of the dream. Over the years, Freud found consistent symbols in his patients' dreams, events that signified the same thing for nearly everyone (refer to Table 2.3).

For example, steps, ladders, and staircases in a dream represented sexual intercourse. Candles, snakes, and tree trunks indicated the penis; and boxes, balconies, and doors signified the female body. Freud warned that despite this apparent universality of symbols, many symbols are specific to the person undergoing analysis and could have a different meaning for someone else.

Table 2.3 Dream symbols or events and their latent psychoanalytic meaning

Smooth-fronted house	Male body
House with ledges, balconies	Female body
King and queen	Parents
Small animals	Children
Children	Genital organs
Playing with children	Masturbation
Baldness, tooth extraction	Castration
Elongated objects (e.g., tree trunks, umbrellas, neckties, snakes, candles)	Male genitals
Enclosed spaces (e.g., boxes, ovens, closets, caves, pockets)	Female genitals
Climbing stairs or ladders; driving cars; riding horses; crossing bridges	Sexual intercourse
Bathing	Birth
Beginning a journey	Dying
Being naked in a crowd	Desiring to be noticed
Flying	Desiring to be admired
Falling	Desiring to return to a state such as childhood where one is satisfied and protected

Dreams reveal conflicts in a condensed, intensified form. Dream events rarely result from a single cause, and any event in a dream can have many sources. Dreams may also have mundane origins. Physical stimuli, such as the temperature of the bedroom or contact with one's partner, can induce a dream, and dreams can also be triggered by internal stimuli, such as a fever or an upset stomach.

It is interesting that of the more than 40 of his own dreams Freud described in his book *The Interpretation of Dreams*, only a few had sexual content, despite his conviction that dreams typically involve some infantile sexual wish. The dominant theme in Freud's reported dreams was ambition, a characteristic he vigorously denied having.

Early research on dreams confirmed Freud's idea that dreams in disguised or symbolic form reflect emotional concerns. However, research does not support his idea that dreams represent a fulfillment of wishes or desires. His ideas on dreams have nonetheless spurred a large number of studies on various aspects of dreams and dreaming.

Dreams may reflect the current state of a person. A study in Hong Kong found that people who slept prone, lying flat on their stomach, were more likely to have dreams involving sexual activities, being smothered, locked up, tied, and unable to move than those who slept in other positions (Yu, 2012). A large-scale study in Germany found that the five most typical dreams involved flying, trying something repeatedly, being chased, having sexual experiences, and matters related to school (Goritz, 2014). A large study in China yielded some similar, some different results: five of the most typical dream themes included being chased, matters related to school, vacationing, eating delicious foods, and encountering the person that you like or you want to see (Yu, 2015).

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People tend to dream about everyday events, exciting experiences, and challenges. Do these represent unconscious socially inappropriate wishes, as Freud argued?

Ordinary Dream Content A great deal of research confirms that dreams often reflect mundane, ordinary, everyday experiences, and that the emotional intensity of these experiences, as well as the person's mood, influences the dream stories (see, for example, Schredl, 2006; Schredl et al., 2006). It apparently often happens that if you are having a bad day, you may well have bad dreams that night. And if something in your room smells bad, even that can affect your dreams. Research in a sleep laboratory in Germany found that a mere 10 seconds exposure to the smell of roses when the subjects were asleep resulted in more pleasant dreams than being exposed to the smell of rotten eggs (Hutson, 2010).

Studies of adults in the United States and in Germany found that women recall their dreams far more than men do, perhaps because women wake up more frequently during the night. Men dream more about men characters, while women dream more or less equally about both men and women characters. Men have many more aggressive dreams than women do (Blume-Marcovici, 2010; Schredl, 2010a).

A long-term study of adults in Canada who kept diaries of their dreams showed a significant correlation between the nature of their dreams and their psychological well-being. Those with lower levels of psychological well-being (thus presumably less happy) reported more dreams of aggression toward others, negative emotions, and failure and misfortune. Those with higher levels of psychological well-being reported dreams of friendly interactions with others, positive emotions, and success and good fortune (Pesant & Zadra, 2006).

Effect of Traumatic Experiences on Dreams It seems clear that dreams are often characterized by highly emotional content from the dreamers' own lives, both past and present. For example, large-scale surveys of Germans between the years 1956 and 2000 showed that those old enough to have been affected directly by World War II (1939–1945) were experiencing highly emotional war-related dreams more than 50 years after the war ended (Schredl & Piel, 2006).

The same was found in studies of British soldiers who had been prisoners of the Germans in World War II. The themes of their dreams centered on being in battle, imprisonment, attempts to escape, and hunger (Barrett et al., 2014). Studies of survivors of 21st-century wars in Iraq and Afghanistan showed that the soldiers' dreams were also characterized by flashbacks to traumatic scenes of battle and other forms of combat stress (Phelps & Forbes, 2012).

Studies of Kurdish and of Palestinian children exposed to physical danger in their everyday lives showed that they dream about threatening and traumatic situations far more than children of these and other cultures reared in more peaceful surroundings (Valli et al., 2006).

Research supports the idea that dreams may indicate higher conflict and anxiety. In one study in Germany, compared to individuals without disorder diagnoses, patients with anxiety disorders had more detailed and frequent dreams, which tended to be more emotionally negative, intense, and vivid emotionality and affected their waking-life more (Rimsh & Pietrowsky, 2022). They also had more nightmares and more distressing nightmares. Additionally, these patients were also more interested in understanding and interpreting their dreams, perhaps to help deal with the conflicts at the root.

Effects of Entertainment Media on Dreams Exposure to entertainment media via smartphones, computers, videos, and video games have all been shown to influence the content and frequency of dreams (Gackenbach et al., 2009). People who spend a great deal of time playing video games tend to have more bizarre dreams containing dead and imaginary characters than people who spend considerably less time playing video games (Gackenbach et al., 2009; Schneider & Domhoff, 2006).

Large-scale studies of children in Britain demonstrated clearly that what they watched on television, as well as what they read, affected the contents of their dreams. It was also found that the more time the kids spent on any one activity, the more it influenced their dreams (Lambrecht et al., 2013; Stephan et al., 2012).

When Chinese college students were asked whether they dreamed in color or in black and white, those who had watched black-and-white television and films as children answered that they dreamed in black and white. Those who had greater exposure to color TV and movies dreamed in color (Schwitzgebel et al., 2006).

Cultural Differences in Dreams Cultural differences in dreaming and attitudes about dreaming have been studied in several populations. Research on the Parintintin Indians of Brazil's Amazon rain forest found that they believe dreams are a means of telling the future. They take dreams seriously, their own and those of relatives and friends (Kracke, 2010). There

may also be cultural differences in willingness to share about one's dreams. A study of White and Asian American college students showed that in childhood, White people were much more likely to tell their parents about their dreams. They were also more likely as they grew older to describe their dreams to friends and to place a high value on their dreams. The Asian American students were more secretive about their dreams and were highly reluctant to talk about them (Fiske & Pillemer, 2006).

Understanding dreams can help us understand not only our individual personalities but the cultural norms that surround us. In a study of people from Hong Kong and Taiwan, dream analyses suggest that people with more harmonious or more family-oriented personalities have fewer dreams with themes that focus on the ego, persecution, and aggressive activities. People with a tendency to save money and avoid wastefulness had more dreams with a grandiosity theme, and this pattern was stronger for people from Hong Kong versus Taiwan, which the authors suggest may reflect historical and cultural differences (Yu & Liu, 2022).

A comparison of the dreams of college students in the United States and China revealed that the Chinese students reported more familiar people in their dreams and fewer aggressive situations than did the American students (Xian-Li & Guang-Xing, 2006). The dreams of Chinese people were found to contain knives, swords, and daggers much more than the dreams of American people (Yu, 2010).

Similarly, research comparing the contents of dreams reported by Iranian and American college students found that the Iranians were far more likely to dream about people they know, to dream about events taking place indoors, and to experience more positive emotions in their dreams than the American sample (Mazandarani et al., 2013).

Interpreting Our Dreams People in both Eastern and Western cultures tend to agree that dreams may contain hidden personal truths that can provide useful information about themselves and their environment (Morewedge & Norton, 2009). As a result, many people are interested in dream interpretation. A study of Islamic students in the United Arab Emirates found that approximately two-thirds of women and one-third of men expressed a great interest in interpreting their dreams (Salem et al., 2009; Schredl, 2010b). Other research has found that Muslims in the United Arab Emirates are far more interested in dream interpretation than a sample of Canadians of the same age (Salem, 2014).

A group of Japanese researchers have determined that it is possible for computers to interpret and recognize the visual images that are taking place in dreamers' minds when they are asleep. They awakened sleeping participants every 6 minutes to ask them to describe what they were seeing just before they woke up. They then wrote a computer program to sort through the different patterns of brain activity recorded on magnetic resonance imaging (MRI) of the participants' brain activity while they were both awake and asleep. The computers learned to decode the images that appeared in the dreams with an average accuracy rate of 66 percent. The researchers claim that this is the first step toward the day when computers will interpret and analyze our dreams for us (Horikawa et al., 2013).

Pause for Reflection

What sort of dreams do you tend to have? Do you think they reflect past experiences or current ones?

Criticisms of Freud's Research

Freud's major research method was the **case study** which, as we saw in Chapter 1, has several limitations. It does not rely on objective observation, the data are not gathered in systematic fashion, and the situation (the psychoanalytic session) is not amenable to duplication and verification. In addition, we cannot systematically vary the conditions of childhood in which patients are reared, nor can we replicate in the laboratory a person's home environment. Thus, clinical observations cannot be repeated, as they can in controlled psychological experiments.

A fundamental criticism of Freud's case studies involves the nature of his data. He did not keep verbatim records of the therapy sessions, and he warned analysts against taking notes during the sessions, believing it would distract their attention from their patients' words. Freud made notes several hours after seeing each patient. Describing his technique for recording his patients' comments, Freud said, "I write them down from memory in the evening after work is over" (quoted in Grubrich-Simitis, 1998, p. 20). As a result, it's possible that his data were incomplete, consisting only of what he remembered hours later.

case study A detailed history of an individual that contains data from a variety of sources.

It is also possible that his memory of the sessions was selective and that he recorded only experiences that supported his theory, or that he interpreted those experiences in ways that would support his theory. Of course, Freud's notes may have been highly accurate, but we cannot be certain because we are unable to compare his case reports with what his patients said. And even if Freud had kept a complete record of his therapy sessions, we cannot determine the validity of the patients' comments. Freud made few attempts to verify the accuracy of a patient's stories, which he might have done by questioning the patient's friends and relatives about the events described. Therefore, the first step in Freud's research, the collection of data, must be characterized as incomplete and possibly inaccurate.

Some critics also suggest that Freud's patients did not actually reveal childhood sexual experiences because, in most cases, those experiences had never occurred. These writers argue that Freud inferred the stories of sexual seduction in childhood from his analysis of the patients' symptoms. For example, although Freud claimed that virtually all his women patients said they had been seduced by their fathers, his case notes do not show that any patient ever claimed that this had occurred (Kihlstrom, 1994).

Other critics agree that Freud was suggesting accounts of childhood sexual abuse without really hearing his patients say so, because he had already formed the hypothesis that such abuse was the true cause of adult neuroses. Still others charge that Freud may have used the power of suggestion to implant alleged memories of childhood abuse that had never taken place (McCullough, 2001). "Where patients did not of their own accord provide material which could be construed in sexual terms, Freud did not hesitate to point them in the 'right' direction" (Webster, 1995, p. 197).

Another criticism of Freud's research is that it is based on a small and unrepresentative sample of people, restricted to himself and those who sought psychoanalysis with him. Only a dozen or so cases have been detailed in Freud's writings, and most of these were of young, unmarried, upper-class White women of good education. It is difficult to generalize from this limited sample to the population at large, which is varied in race, ethnicity, education, class, and gender.

In addition, there may be discrepancies between Freud's notes on his therapy sessions and the case histories he published, which supposedly were based on these notes. Several investigators compared Freud's notes with the published case study of the Rat Man, one of his most famous patients. They found a lengthening of the period of analysis, an incorrect sequence of events disclosed by the patient, and unsubstantiated claims that the analysis resulted in a cure (Eagle, 1988; Mahoney, 1986).

Thus, the published version of the case did not agree with the notes Freud made after his sessions with the patient. It is not possible to determine whether Freud deliberately made these changes to bolster his theory (or his ego) or whether they were the products of his unconscious. Nor do we know if such distortions characterize other Freudian case studies. It may remain a mystery forever because Freud destroyed most of his patient files not long after he compiled them.

Relatedly, it has been argued that none of Freud's handful of published case histories provides compelling supporting evidence for his theory. One of Freud's biographers concluded: "Some of the cases present such dubious evidence in favor of psychoanalytic theory that one may seriously wonder why Freud even bothered to publish them" (Sulloway, 1992, p. 160).

Finally, Freud's theories are misogynistic—sexist against women. For example, the idea that women's personalities develop a certain way because they are envious of men's genitalia is problematic because it subjugates women to being the lacking sex, has no basis in research findings, and does not help us understand human nature. Three major problems with Freud's theories have to do with his arguing that women's development is mainly driven by the phallic phase (i.e., penis envy), that women cannot be as moral or objective as men, and his naming certain behaviors as feminine versus masculine when other words would have been accurate and less sexist (Schafer, 1974/2019). Although much of his theory can be situated in the sexism of the time when he was writing, the fact that he forwarded theories that his own and other data did not really support is extremely problematic.

We will see in later chapters that these kinds of criticisms leveled against Freud also apply to later personality theorists who used the case study as their primary research method, based their theories on their patients' reports, and fail to think about diversity and equality. This does not automatically mean that their work is devoid of merit, especially insofar as personality psychology was moved forward by these theories, especially by theorists and researchers challenging established theories and doing more rigorous research. But all theories should be subjected to the scientific method to test whether they are useful in understanding human nature and personality.

Freud's Negative Views on Experimental Research

Although Freud was familiar with the experimental method, he had little confidence in it, believing that "scientific research and psychoanalysis are inherently incompatible" (Chiesa, 2010, p. 99). An American psychologist once sent him information about experiments that had been conducted to validate Freudian concepts. Freud "threw the reprints across the table in a gesture of impatient rejection" and wrote to the psychologist that he did not "put much value on such confirmation" (Rosenzweig, 1985, pp. 171, 173). He believed there was no need for the kinds of experiments published in the psychology journals of the day because "they told him nothing more than he had already learned from his clinical encounters with patients" (Holzman, 1994, p. 190).

Freud insisted that his work was scientific, that he had amassed ample proof for his conclusions, and that only psychoanalysts who used his techniques were qualified to judge the scientific worth of his work. Freud wrote that psychoanalysis was based on "an incalculable number of observations and experiences, and only someone who has repeated those observations on himself and on others is in a position to arrive at a judgment of his own upon it" (Freud, 1940, p. 144).

Difficulty arises because Freud's observations cannot be repeated. As we have seen, we have no way of knowing exactly what he did in collecting his data and in translating his observations into hypotheses and generalizations.

Highlights

Research on Freud's Ideas

People who score low in *ego control* tend to be:

- Aggressive and noncompliant
- Unpredictable and assertive
- Moody and self-indulgent

People who score low in *ego resiliency* tend to be:

- Stressed during negative interactions with parents
- Anxious and in need of reassurance
- Unassertive, sad, and lacking social skills

People who vent anger through *catharsis* tend to be:

- Even angrier afterward
- Attracted to violent video games

Research supports Freud's concepts of:

- The influence of the unconscious
- Displacement
- Repression
- Denial
- Projection
- The so-called Freudian slip
- Dreams as a reflection of emotional concerns

Extensions of Freudian Theory

Several theorists we will cover in the chapters to follow developed positions in opposition to Freud's. Other theorists remained faithful to some of Freud's basic assumptions but attempted to expand, extend, or elaborate on his views. One of the most important of this group was Freud's daughter Anna, who set out to counteract what were seen as weaknesses or omissions in the Freud's psychoanalysis and to build on those weaknesses.

Ego Psychology: Anna Freud

Anna Freud (1895–1982) said she never would have been born if a safer contraceptive method been available to her parents. Despite that beginning she became the only one of Freud's six children to follow in his path (Young-Bruehl, 1988). She was an unhappy child who was jealous of the older sister favored by her mother and was ignored by her other siblings. She later lamented "the experience of being . . . only a bore to them, and of feeling bored and left alone" (Appignanesi & Forrester, 1992, p. 273).

But Anna was not ignored by her father. She became his favorite, and by the age of 14 was dutifully attending meetings of his psychoanalytic group, listening attentively to the case histories being presented and discussed. At 22, Anna began 4 years of psychoanalysis with her father, who was later sharply criticized for analyzing his daughter.

One historian called it "an impossible and incestuous treatment . . . an Oedipal acting-in at both ends of the couch" (Mahoney, 1992, p. 307). But another explained: "No one else would presume to undertake the task, for Anna's analysis would inevitably call into question Freud's role as her father" (Donaldson, 1996, p. 167). To analyze one's child was a serious violation of Freud's own rules for the practice of psychoanalysis, and the situation with Anna was kept secret for many years.

In her analysis, Anna reported violent dreams involving shooting, killing, and dying, as well as defending her father from his enemies. Nevertheless, "she shared with him her sexual fantasies and her forays into

API/Gamma-Rapho/Getty Images

Anna Freud with her father, Sigmund Freud, in 1913.

masturbation and emerged from the analysis grateful to her father and more committed to him than ever" (Edmundson, 2007, p. 61).

Anna Freud joined the Vienna Psychoanalytic Society, presenting a paper entitled *Beating Fantasies and Daydreams.* Although she claimed to be describing the experiences of a patient, she was actually relating her own fantasies. She spoke of an incestuous love relationship between father and daughter, a physical beating, and sexual gratification through masturbation.

She devoted her life to the care of her father and to his system of psychoanalysis. Several years after he died, she described a series of dreams she had about him. "He is here again. All of these recent dreams have the same character: the main role is played not by my longing for him but rather his longing for me. . . . In the first dream of this kind, he openly said: 'I have always longed for you so' " (Anna Freud, quoted in Zaretsky, 2004, p. 263).

And while Anna was close to death, some 40 years after her father died, she would sit in a wheelchair wearing his old wool coat, which she had kept all those years (Webster, 1995).

Anna Freud's Approach to Psychoanalysis

Whereas the elder psychoanalyst Freud had worked only with adults, attempting to reconstruct their childhoods by eliciting their recollections and analyzing their fantasies and dreams, Anna worked only with children. She established a clinic and a center to train analysts in the building next door to her father's home in London. In 1927 she published *Four Lectures on Child Analysis.* Sigmund Freud approved of her work: "Anna's views on child analysis are independent of mine; I share her views, but she has developed them out of her own independent experience" (Freud quoted in Viner, 1996, p. 9).

Anna Freud substantially revised orthodox psychoanalysis by greatly expanding the role of the ego, arguing that the ego operates independently of the id. This was a major extension of the Freudian system that involved a fundamental and radical change.

She proposed those refinements in *The Ego and the Mechanisms of Defense*, published in 1936 (while her father was still alive), in which she clarified the operation of the defense mechanisms. The book received widespread praise and is considered a basic work on ego psychology. The standard defense mechanisms discussed earlier in this chapter owe their full development and articulation to Anna Freud. This is only one of her significant contributions to psychoanalytic theory.

Reflections on Freud's Theory

Freud's system of psychoanalysis has had a phenomenal impact on theory and practice in psychology and psychiatry, on our image of human nature, and on our understanding of personality. His influence has also been felt in the general culture, and his work has been featured in many popular books, magazines, and newspapers. One article called him an "inescapable force," exerting an impact even 65 years after his death (see Adler, 2006, p. 43).

Psychoanalysis contributed to the growing interest of American psychologists in the study of personality beginning in the 1930s. In the 1940s and 1950s, the ideas of psychoanalysis influenced the emerging study of motivation in psychology. Contemporary psychology has absorbed many Freudian concepts, including the role of the unconscious, the importance of childhood experiences in shaping adult behavior, and the operation of the defense mechanisms. As we have seen, these and other ideas continue to generate a great deal of research.

We will see further evidence of Freud's importance in the chapters about personality theorists who built on Freud's system or used it as a source of opposition for their ideas. Great ideas inspire not only by being considered valid but also by being perceived as incorrect, thus stimulating the development of other viewpoints.

The Decline of Freudian Psychotherapy

Freud's theory of personality remains more influential than his system of psychoanalytic therapy. Although research on Freud's ideas and experimental tests of his concepts continue to be plentiful, psychoanalysis as a therapeutic technique has declined in popularity, particularly in the United States.

In China, however, psychoanalysis as a method of therapy has become more popular. Freudian psychoanalysts in the United States have been offering training programs to a growing number of Chinese psychoanalysts online (Osnos, 2011; Wan, 2010). In some European countries, conducting traditional psychoanalytic sessions online has also been growing rapidly with initial reports of successful results (Migone, 2013).

In addition, some research has found that the use of social robots can enhance the effectiveness of psychoanalysis, particularly among the elderly. These so-called "companion robots" have been successful in enhancing physical and cognitive functioning and in improving well-being among patients (Costescu et al., 2014).

Growing numbers of people are seeking therapy, but fewer are choosing the expensive, long-term approach Freud developed. Briefer courses of therapy, lasting from 1 to 15 sessions, have become the norm, along with the increasing use of psychotherapeutic drugs.

The trend away from orthodox psychoanalysis in the United States has also been reinforced by the managed-care approach to total health care. It is considerably less costly for insurance companies to approve a treatment regimen that involves simply prescribing a drug rather than a course of psychoanalysis that might last several years. In addition, managed care demands empirical evidence of the effectiveness of therapeutic treatment before providing insurance reimbursement and the evidence for the effectiveness of psychotherapy is weak (see, for example, Mayes & Horwitz, 2005).

Criticisms of Psychoanalysis

We have already noted the flaws in the case study approach, Freud's primary method of research. In addition to those issues, raised mainly by experimental psychologists, there are also questions asked by other personality theorists. Some argue that Freud placed too great an emphasis on instinctual biological forces as determinants of personality.

Others challenge Freud's focus on sex and aggression as major motivating forces and believe that we are shaped more by social experiences than by sexual ones. Some theorists disagree with Freud's deterministic view of human nature, suggesting that we have more free will than Freud acknowledged, and that we can choose to act and grow spontaneously and to be in at least partial control of our fate.

Another criticism focuses on Freud's emphasis on past behavior to the exclusion of our goals and aspirations. These theorists argue that we are also influenced by the future, by our hopes and plans, as much as or more than by our experiences before age 5. Still other personality theorists think Freud paid too much attention to those with neurosis, to the exclusion of the psychologically healthy and emotionally mature.

Critics suggest that if we wish to develop a theory of human personality, why not study the best and the healthiest, the positive human qualities as well as the negative ones? Theorists also take exception to Freud's views on women, specifically to the concepts of penis envy, women's poorly developed superegos, and women's inferiority feelings about their bodies.

Ambiguous definitions of certain Freudian concepts have also been questioned. Critics point to confusion and contradiction in such terms as id, ego, and superego. Are they distinct physical structures in the brain? Are they fluid processes? In his later writings Freud addressed the difficulties of defining some of his concepts precisely, but the questions remain.

Freud's Lasting Influence

This book is a history of modern insights into personality. In our personal and social growth we are never free of our past, nor should we want to be. The past offers the foundation on which to build, as later personality theorists have built on Freud's work. If psychoanalysis has served no other purpose than to inspire others and provide a framework within which to develop new insights, then Freud's importance to the world of ideas is secure. Every structure depends on the soundness and integrity of its foundation. Sigmund Freud gave personality theorists a highly original, stimulating, and challenging base on which to build.

DEI Spotlight

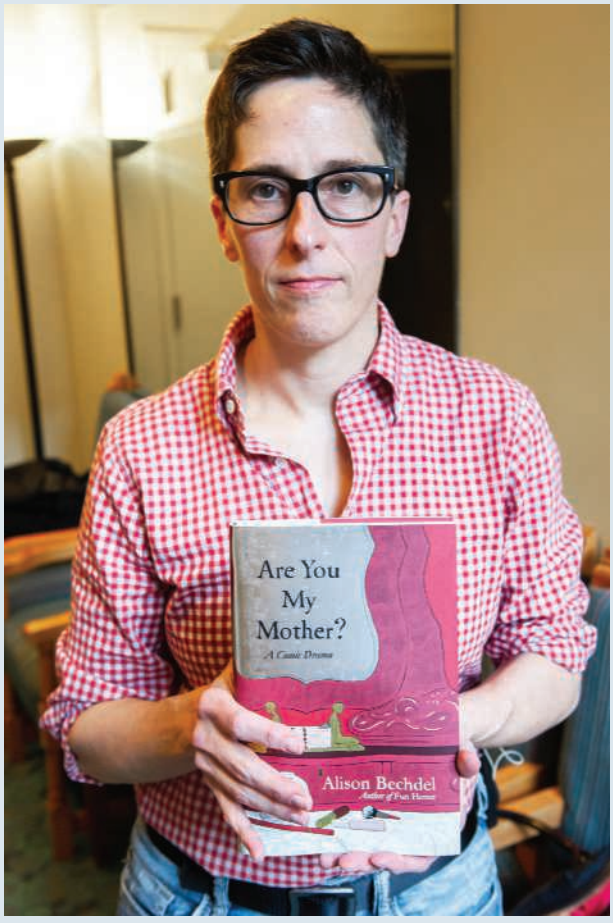
Freud's Theory and Diversity, Equity, and Inclusion

Freud's focus on the unconscious and effects of relationships with family has special implications for individuals, families, and society when it comes to diversity, equity, and inclusion, especially in light of more modern advances.

Individual. Alison Bechdel, a famed graphic novelist and cartoonist and active member of the LGBTQA+ community, has shared that psychotherapy has and does play an important role in her life (Critchfield & Pula, 2015). Four months after her coming out at 19 years old, Alison's father died. Such a loss is sad and causes grief enough, but there was another layer that would shape how Alison lived her life: her father was gay but kept it a secret. Through psychotherapy as well as her art, Alison was better able to process her pain, to understand and love herself, and to create narratives that explore complex relationships, including through reflecting on her dreams. Her memoir work even features psychotherapy sessions, which are thought to create a depth of story and character that draw the reader in.

Family and Society. Here we introduce our DEI focus on family and society by exploring the insights of Kris Yi, PhD, PsyD, a psychoanalytic clinical psychologist with over 30 years of experience, on identity development of minoritized non-White individuals in the United States. She argues that it is an oversimplification to conceptualize "racial/ethnic identity in terms of it being shaped by minority individuals' relationship to the dominant culture. While these theories expose the power dynamics behind the splitting of dominant and minority cultures, they also conceptualize racial identity in binary terms of the White oppressor and the injured racial other. In these writings, no substantive weight has been given to the possibility that minorities' racial identities may not be a function exclusively of their internalized oppression" (Yi, 2014, p. 429).

To illustrate this argument, Dr. Yi shares about her psychoanalysis of a patient named "Anne," a young Vietnamese woman. Anne was thoughtful, spoke beautifully, but avoided experiencing negative emotions and did not think of herself as worthy. Anne had internalized the idea that "This is what it means to be a Vietnamese woman. Resigned to life's suffering" based on ancient Vietnamese stories and poems that had been passed down, to which she attended as a source of cultural understanding. Dr. Yi pointed out that Anne's connection to the female protagonist of one such poem, in which a wife of a soldier longs for and laments the absence of her beloved husband forced to go to war, might actually reflect her internalizing her mother's acceptance her own stressful and traumatic experiences. Dr. Yi writes, "Anne unconsciously idealized passivity over assertiveness. I suggested that her idealization of passivity served a function of masking the very painful feelings associated with her traumas in her family. Anne never squarely dealt with the hurt, anger, shame, humiliation, and fear she endured as a child. She had never confronted her parents and the relatives" (p. 431). So, Anne assumed that quiet



Gary Leonard/Getty Images

Alison Bechdel writes about her experiences in psychotherapy.

DEI Spotlight, continued

Freud's Theory and Diversity, Equity, and Inclusion

suffering was something from her culture, it was really something that her mother and, in turn, she experienced. Recall that Freud theorized that children over-identify with their same-gender parent as part of development. The implication of this work is that minoritized individuals within groups within society have complex identities and personality that are not merely reflective of their relationship to the minority group and that much of these complex identities are internalizations of family trauma, especially via same-gender parent relationships. Such family trauma may result from the challenges of immigrant experience. These insights were made possible by the application of psychoanalysis.

Chapter Summary

Freud's theory is at least partly autobiographical in that he based some of his major concepts on his childhood experiences, dreams, and sexual conflicts. It was also largely based on the idea that many people experience sexual trauma in childhood. With regard to repressed memories of childhood sexual abuse, research and records suggest that some may be real, whereas others may be implanted and distorted.

Instincts are mental representations of stimuli that originate within the body. Life instincts serve the purpose of survival and are manifested in a form of psychic energy called libido. Death instincts are an unconscious drive toward decay, destruction, and aggression.

The three structures of the personality are the id, ego, and superego. The id, the biological component of personality, is the storehouse of instincts and libido. It operates in accordance with the pleasure principle, seeking out what satisfies needs and therefore feels good. The ego, the rational component of personality, operates in accordance with the reality principle. The superego, the moral side of personality, consists of the conscience (behaviors for which the child is punished) and the ego-ideal (behaviors for which the child is praised). The ego mediates among the demands of the id, the pressures of reality, and the dictates of the superego. Research suggests that the stronger people's ego resilience, the more well-being they have. It is also important to be high in ego control, but not so high as to be inflexible to the changing environment and challenges of life.

Anxiety develops when the ego is pressured too greatly. Reality anxiety is a fear of dangers in the real world. Neurotic anxiety is a conflict between instinctual gratification and reality. Moral anxiety is a conflict between the id and the superego. Defense mechanisms operate unconsciously. They are distortions of reality that protect the ego from the threat of anxiety. Defense mechanisms include repression, reaction formation, projection, regression, rationalization, displacement, and sublimation. Research suggests that people indeed use defense mechanisms and that there are more mature ones and less mature ones, and some work better than others.

Children pass through psychosexual stages of development defined by the erogenous zones of the body. The oral stage involves two modes of behavior: oral incorporative and oral aggressive. The anal stage involves the first interference with the gratification of an instinctual impulse. The phallic stage involves the Oedipus complex, the child's unconscious sexual longings for the parent of the opposite sex and feelings of rivalry and fear toward the parent of the same sex.

Boys develop castration anxiety; girls develop penis envy. Boys resolve the Oedipus complex by identifying with their father, adopting their father's superego standards, and repressing their sexual longing for their mother. Girls are less successful in resolving the complex, which leaves them with poorly developed superegos, Freud claimed. During the latency period, the sex instinct is sublimated in school activities, sports, and friendships with persons of the same sex. The genital stage, at puberty, marks the beginning of heterosexual relationships. Research does not support the existence of psychosexual stages but does indicate that the "anal-retentive" personality type captures how some people are.

Freud's image of human nature is pessimistic. We are doomed to anxiety, to the thwarting of impulses, and to tension and conflict. The goal of life is to reduce

tension. Much of human nature is inherited, but part is learned through parent–child interactions.

Two methods of personality assessment in Freud's framework are free association and dream analysis. In free association, a patient spontaneously expresses ideas and images in random fashion. Sometimes resistances develop in which a patient resists talking about disturbing memories or experiences. Dreams have both a manifest content (the actual dream events) and a latent content (the symbolic meaning of those events). Research suggests that the content of dreams indeed reflects anxieties and events in people's lives, but not the interpretations that Freud would have made, which were largely sexual in nature.

Freud's research method was the case study, which does not rely on objective observation. It is not controlled and systematic, nor is it amenable to replication and verification. Freud's data are not quantifiable, may be incomplete and inaccurate, and were based on a small and nonrepresentative sample.

Freud's theory has been modified by his daughter and diligent disciple, Anna Freud, who elaborated on the role of the ego. Personality theorists criticize Freud for placing too much emphasis on biological forces, sex, aggression, emotional disturbances, and childhood events. They also criticize his deterministic image of human nature, his negative views of women, and the ambiguous definitions of some of his concepts. However, there is no denying Freud's phenomenal impact on popular psychology and on later personality theorists, who either elaborated upon or opposed his system.

Review Questions

1. In what ways did Freud's theory reflect his childhood experiences?
2. Compare and contrast the conscious and the unconscious. Describe how research supports the existence of the unconscious.
3. What are the instincts, and how do they relate to behavior in Freud's theory?
4. Define the id, the ego, and the superego. How are they interrelated?
5. What is the difference between ego control and ego resiliency? Describe some personality characteristics of people who score high in ego control.
6. What are the three types of anxiety Freud proposed? What is the purpose of anxiety?
7. What are defense mechanisms?
8. Compare and contrast four defense mechanisms, including definitions and how some are better than others for mental health.
9. Does the Freudian defense mechanism of repression explain all instances of repressed memories of childhood abuse? What other factors might account for such memories?
10. What are Freud's psychosexual stages of development?
11. According to Freud's theory, what is fixation, and how does it manifest at the oral incorporative phase? At the anal retentive phase?
12. What is free association, and how can it be used to understand individuals' personalities?
13. What is dream analysis, and how can it be used to understand individuals' personalities?
14. What criticisms have been made of Freud's case study method?
15. Describe some of the ways in which Anna Freud extended and modified traditional Freudian theory.
16. Discuss the current status and acceptance of psychoanalysis as a personality theory and as a method of psychotherapy.

Suggested Readings

- Cohen, D. (2012). *The escape of Sigmund Freud.* Overlook Press. An account of Freud's escape from the Nazis in Vienna with the help of a German official, and the last two years of his life in London.
- Coles, R. (1993). *Anna Freud: The dream of psychoanalysis.* Addison-Wesley. Describes Anna Freud's life, her work on defense mechanisms, and her hopes for the future of psychoanalysis.
- Ellenberger, H. F. (1970). *The discovery of the unconscious: The history and evolution of dynamic psychiatry.* Basic Books. Traces the study of the unconscious from primitive times to Freudian psychoanalysis and its derivatives.
- Gafner, G. (2012). *Subliminal: How your unconscious mind rules your behavior.* Pantheon. A physicist's account summarizing research in neuroscience and psychology showing how much of our behavior, emotions, and cognitive processes are influenced by unconscious processes.
- Krüll, M. (1986). *Freud and his father.* Norton. Examines the lives of Sigmund Freud and his father and analyzes the influences of Freud's experiences as a son on the development of psychoanalysis.

- Lerman, H. (1986). *A mote in Freud's eye: From psychoanalysis to the psychology of women.* Springer-Verlag. Describes how Freud's negative bias toward women developed from his personal experiences and permeated his theory of psychoanalysis. Shows how Freud's stages of psychosexual development, as they apply to females, have been largely disproved, and offers criteria for a woman-based personality theory.
- Markel, H. (2011). *An anatomy of addiction: Sigmund Freud, William Halstead, and the miracle drug cocaine.* Vintage. An account of the uses and abuses of cocaine in the 19th century, as recounted through the lives of two users, Freud and the noted American physician William Halstead.
- Mitchell, S. A., & Black, M. J. (2016). *Freud and beyond: A history of modern psychoanalytic thought*. Hachette UK.
- Roazen, P. (1975). *Freud and his followers.* Knopf. A lively, well-written account of Freud's life and of the men and women who became his disciples, some of whom later broke away to form their own schools of thought.
- Sulloway, F. J. (1979). *Freud, biologist of the mind: Beyond the psychoanalytic legend.* Basic Books. A biography that places Freud's work in the context of its times and disputes the legend that Freud was a lonely hero working in isolation.

Part 2

The Neo-Psychoanalytic Approach

Several personality theorists, who initially were loyal to Freud and committed to his system of psychoanalysis, broke away because of their opposition to certain aspects of his approach. Carl Jung and Alfred Adler were associates of Freud before they offered their own, somewhat consistent, somewhat critical and contrasting theories of personality. Karen Horney did not have a personal relationship with Freud but was also an orthodox Freudian before marking out a different path. Erik Erikson's work is also derived from Freudian psychoanalysis.

These neo-psychoanalytic theorists differ from one another on a number of issues, but they were equally opposed to Freud's emphasis on instincts as the primary motivators of human behavior as well as his deterministic conception of personality. These neo-psychoanalytic theorists presented more optimistic and flattering images of human nature than Freud did. Their work shows how quickly the field of personality diversified within only a decade after it formally began.

Chapter 3

My life is a story of the self-realization of the unconscious. Everything in the unconscious seeks outward manifestation, and the personality too desires to evolve out of its unconscious conditions. —Carl Jung

Carl Jung: Analytical Psychology

Learning Objectives

3.1 Compare and contrast Jung's theory with that of Freud, providing three examples of similarities and differences.

3.2 Describe Jung's concept of psychic energy and the three principles that apply to it (opposites, equivalence, and entropy).

3.3 Outline the relationships among the ego, personal unconscious, and collective unconscious.

3.4 Define "archetype" and provide three examples of archetypes.

3.5 Summarize Jungian's personality traits as they relate to the "attitudes" of introversion and extraversion and the "functions" of thinking, feeling, sensing, and intuiting.

3.6 Identify what personality changes must occur to achieve individuation.

3.7 Analyze the problems with the Myer-Briggs Type Inventory (MBTI).

3.8 Summarize the Jungian view of personality in five sentences.

Sigmund Freud once designated Carl Jung as his spiritual son and heir, but Jung went on to develop his own theory of personality that differed dramatically from orthodox psychoanalysis. He fashioned a new and elaborate explanation of human nature quite unlike any other, which he called **analytical psychology**.

The first point on which Jung came to disagree with Freud was the role of sexuality. Jung broadened Freud's definition of libido by redefining it as a more generalized psychic energy that included sex but was not restricted to it.

The second major area of disagreement concerned the direction of the forces that influence personality. Whereas Freud conceptualized human beings as prisoners or victims of past events, Jung believed that "man is not necessarily doomed forever to be shoved about by traumas over which he could exercise little control" (Obituary, *New York Times,* June 7, 1961). Jung argued that we are shaped by our future as well as our past. We are affected not only by what happened to us as children but also by what we aspire to do in the future.

The third significant point of difference revolved around the unconscious. Rather than minimizing the role of the unconscious, as did the other neo-psychoanalytic dissenters we will discuss, Jung placed an even greater emphasis on it than Freud did. He probed more deeply into the unconscious and added an entirely new dimension: the inherited experiences of all human and even prehuman species. Although Freud had recognized the influence of inherited primal experiences, Jung made it the core of his system of personality. He brought together ideas from history, mythology, anthropology, and religion to form his own theory of human nature.

The Life of Jung (1875–1961)

An Unhappy Childhood

Jung's difficult and unhappy childhood years were marked by deaths and funerals, neurotic parents in a failing marriage, religious doubts and conflicts, bizarre dreams and visions, and a wooden doll as his only companion. Born in Switzerland into a family that included nine clergymen (eight uncles and his father), Jung was introduced at an early age to religion and the classics. He was close to his father but considered him weak and powerless. Although kind and tolerant, Jung's father experienced periods of moodiness and irritability and failed to be the strong authority figure his son needed.

Jung's mother was by far the more powerful parent, but her emotional instability led her to behave erratically. She would change in an instant from being cheerful and happy to suddenly mumbling incoherently and gazing vacantly into space. As a boy, Jung came to view his mother as being two different people inhabiting the same body. Not surprisingly, this disturbed him. One biographer suggested that "the whole maternal side of the family appeared to be tainted with insanity" (Ellenberger, 1978, p. 149).

As a result of his mother's dysfunctional behavior, Jung became wary of all women, a suspicion that took many years to dispel. He later described his mother as being fat and unattractive, which may explain why he totally rejected Freud's notion that every boy has a sexual longing for his mother. Clearly, that did not reflect his childhood experience.

To avoid his parents and their continuing marital problems, Jung spent many hours alone in the attic, carving a doll out of wood, a figure in whom he could confide his innermost thoughts and fears. Although his sister was born when Carl was 9 years old, her presence in the house did nothing to ease his loneliness and feeling of isolation.

Strange Dreams and Fantasies

Distrustful of his mother and disappointed in his father, Jung felt cut off from the external world, the world of conscious reality. As an escape, he turned inward to his unconscious, to the world of dreams, visions, and fantasies, in which he felt more secure. This choice would guide Jung for the rest of his life. Whenever he was faced with a problem, he would look for a solution through his dreams and visions.

The essence of his personality theory was shaped in essentially the same way. When Jung was three, he dreamed he was in a cavern. In a later dream, he saw himself digging down beneath the earth's surface, unearthing the bones of prehistoric animals. To Jung, such dreams represented the direction of his approach to the human personality. They directed him to explore the unconscious mind, which lies beneath the surface of behavior.

So strongly was he guided by these manifestations of his unconscious that he entitled his autobiography *Memories, Dreams, Reflections* (1961). He believed that his approach to personality resembled a subjective, personal confession. Thus, like Freud's work, Jung's personality theory was intensely autobiographical. In a lecture given at the age of 50, he acknowledged the influence of his life events on his theory.

As a child, Jung deliberately avoided other children, and they avoided him. A biographer wrote: "Carl usually played alone for parents of the village children deliberately kept them away from the odd little boy whose parents were so peculiar" (Bair, 2003, p. 22). In describing his solitary childhood, Jung wrote, "The pattern of my relationship to the world was already prefigured; today as then I am a solitary" (Jung, 1961, pp. 41–42).

analytical psychology Jung's theory of personality, which emphasizes the role of psychic energy and both the individual and shared unconscious.

Jung's loneliness is reflected in his theory, which focuses on the inner growth of the individual rather than on relationships with other people. In contrast, Freud's theory is concerned more with interpersonal relationships, perhaps because Freud, unlike Jung, did not have such an isolated and introverted childhood.

The Study of Medicine

Jung disliked school and resented the time he had to devote to formal studies rather than to ideas that interested him. He much preferred to read on his own, particularly about religious and philosophical issues. To his delight, he was forced to miss six months of school as a result of a series of fainting spells. He returned to school, but his presence was disruptive. His teachers sent him home because his classmates were more interested in "waiting for Carl to faint than in doing their lessons" (Bair, 2003, p. 31).

When Jung overheard his father say, "What will become of the boy if he cannot earn his living?" his illness suddenly disappeared, and he returned to school to work more diligently than before (Jung, 1961, p. 31). Jung later wrote that the experience taught him about neurotic behavior. He recognized that he had unconsciously arranged the situation to suit himself, to keep him out of school, and that realization made him feel angry and ashamed.

Jung chose to study medicine at the University of Basel and decided, to the disappointment of his professors, to specialize in psychiatry, a field then held in low repute. He believed that psychiatry would give him the opportunity to pursue his interests in dreams, the supernatural, and the occult.

Beginning in 1900, Jung worked at a mental hospital in Zurich under the direction of Eugen Bleuler, the psychiatrist who coined the term *schizophrenia.* When Jung married the second-richest heiress in all of Switzerland, he quit his job at the hospital and spent his spare time riding around the countryside in his much-loved red Chrysler convertible. He also gave lectures at the University of Zurich and developed an independent clinical practice.

The Years with Freud

By the time Jung became associated with Sigmund Freud in 1907, Jung had already established a significant professional reputation on his own. When Jung and Freud met for the first time, they were so congenial and had so much to share that they talked for 13 hours. Their friendship became a close one. "I formally adopted you as an eldest son," Freud wrote to Jung, "and anointed you as my successor and crown prince" (Freud & Jung, 1974, p. 218). Jung considered Freud a father figure. "Let me enjoy your friendship not as one between equals," he wrote to Freud, "but as that of father and son" (Freud & Jung, 1974, p. 122). Their relationship appeared to contain many of the elements of the Oedipus complex, with its inevitable wish of the son to destroy the father.

Also, their relationship may have been tainted, even doomed, by an uncomfortable sexual experience Jung said he had at the age of 18. A family friend, an older man who had been a father figure and confidant, made physical overtures to Jung, seeking a sexual relationship. Repelled and disappointed, Jung broke off the relationship. Years later, when Freud, who was nearly 20 years older than Jung, attempted to designate Jung as his son and heir, Jung may have felt Freud was, in a sense, forcing himself on Jung and changing the nature of their relationship. Because of Jung's earlier encounter with the older man, he may have been similarly disappointed in Freud and unable to sustain an emotionally close relationship with him.

For a time, however, the two men remained close. Jung continued to live in Zurich, but he met with Freud periodically and maintained a voluminous correspondence. In 1909, he traveled with Freud to the United States to lecture at Clark University. Freud was preparing Jung to take over the presidency of the International Psychoanalytic Association. Concerned that psychoanalysis would be labeled a "Jewish science" (as it came to be called during the Nazi era) and therefore not accepted widely, Freud wanted a person who was not Jewish to assume titular leadership of the movement.

Contrary to Freud's hopes, Jung was not an uncritical disciple. Jung had his own ideas and unique theory of the human personality, and when he began to express these notions, it became inevitable that they would part. They severed their relationship in 1913.

Pause for Reflection

Were there aspects of Freud's theory that you would be glad for Jung to update?

Jung's Neurotic Episode

That same year, when Jung was 38 years old, he had what was called a severe neurotic, even psychotic at times, episode that lasted for three years. He believed he was in danger of losing contact with reality and was so distressed that he resigned his lectureship at the University of Zurich. At times he considered suicide.

He "kept a revolver next to his bed in case he felt he had passed beyond the point of no return" (Noll, 1994, p. 207). Although he felt unable to continue with his scientific work, he somehow continued to treat his patients.

During the crisis, Jung experienced vivid and violent dreams and visions involving large-scale disasters such as ice covering the earth, flowing rivers of blood, and even the destruction of all civilization (see Elms, 2010). Other dreams were more personal but equally terrifying: "Jung travels the land of the dead, falls in love with a woman he later realizes is his sister, gets squeezed by a giant serpent and . . . eats the liver of a little child" (Corbett, 2009, p. 5).

During those years he was haunted by visions of a bloody apocalypse and widespread carnage and desolation. He meticulously recorded those dreams in calligraphy and elaborate drawings in some 200 pages of what became known as *The Red Book,* so called because it was bound in red leather. The journal was kept secret in a Swiss bank vault and was not published until 2009, nearly 50 years after his death (see Harrison, 2009). The book received widespread publicity and quickly became an international sensation.

Freud, as we reviewed, had also experienced a neurotic episode at approximately the same age and resolved it by analyzing his dreams, which formed a basis for his personality theory. Jung's situation offers a remarkable parallel. Jung reportedly overcame his disturbance by confronting his unconscious through the exploration of his dreams and fantasies. Although Jung's self-analysis was less systematic than Freud's, his approach was similar.

Out of Jung's confrontation with his unconscious he fashioned his approach to personality. "The years when I was pursuing my inner images," he wrote, "were the most important in my life—in them everything essential was decided" (Jung, 1961, p. 199). He concluded that the most crucial stage in personality development was not childhood, as Freud believed, but middle age, which was the time of Jung's own crisis.

Like Freud, Jung established his theory on an intuitive base, which derived from his personal experiences and dreams. It was then refined more systematically by data provided by his patients. Nearly two-thirds of them were middle-aged and experiencing difficulties similar to the ones Jung faced.

Jung's Sex Life

Jung, who minimized the importance of sex in his personality theory, maintained a vigorous, anxiety-free sex life, including a number of extramarital affairs. One of these relationships endured, with his wife's knowledge, for many years. He surrounded himself with adoring women patients and disciples who typically fell deeply in love with him. A biographer noted that this "happened with all of his female disciples sooner or later, as he often told them at the beginning of their treatment" (Noll, 1997, p. 253).

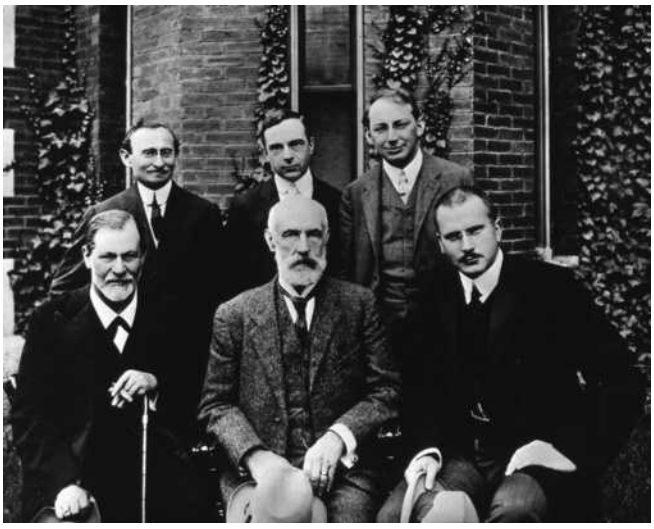
Contrast Jung's active sex life with Freud's troubled attitude toward sex and his cessation of sexual relations at the time he was fashioning a theory that focused on sex as the cause of neurotic behavior. "To Jung, who freely and frequently satisfied his sexual needs, sex played a minimal role in human motivation. To Freud, beset by frustrations and anxious about his thwarted desires, sex played the central role" (Schultz, 1990, p. 148).

Fame and Weird Behavior

The rest of Jung's long life was considered by many to be personally and professionally successful, although he did behave in some really bizarre ways. In the mornings he would greet the kitchen utensils, saying "'greetings to you' to the frying pans or 'good morning to you' to the coffee pot" (Bair, 2003, p. 568). He also worried needlessly about money even though he was quite wealthy. He hid large amounts of cash inside books and then forgot the secret code he had devised to help him remember which books contained the money. He stuffed money into vases and jars and buried them in his garden and then forgot the elaborate system he had concocted to help him find them. After his death, his family recovered much of the money from his books, but it is likely that the cash in his garden remains there today.

Jung and his wife adopted a cold, formal manner for parenting their three daughters. There was limited physical contact, no hugging or kissing. "When they said hello or goodbye, they shook hands, if they touched at all" (Bair, 2003, p. 565).

Jung remained productive in research and writing for most of his 86 years. His books became popular, and his analytical psychology attracted increasing numbers of students and practitioners. His ideas spread to the English-speaking world, and particularly to the United States, primarily through the generous financial support of the wealthy and prominent Rockefeller, McCormick, and Mellon families. A number of the family members sought analysis with Jung and in return arranged for the translation and publication of his books into English. It is interesting to speculate whether Jung's works might have remained little known without their help, inaccessible to all but the German-speaking community (Noll, 1997).



Well/Alamy Stock Photo

Sigmund Freud (front left), G. Stanley Hall, Carl Jung (front right), A. A. Brill, Ernest Jones, and Sándor Ferenczi posed at Clark University, Worcester, Massachusetts in September 1909. This is the first time Freud and Jung met.

Psychic Energy: The Basis of Jung's System

One of the first points on which Jung disagreed with Freud involved the nature of libido. Jung did not believe that libido was primarily a sexual energy; he argued instead that it was a broad, undifferentiated life energy.

Jung used the term **libido** in two ways: first, as a diffuse and general life energy, and second, from a perspective similar to Freud's, as a narrower psychic energy that fuels the work of the personality, which he called the **psyche**. It is through psychic energy that psychological activities such as perceiving, thinking, feeling, and wishing are carried out.

libido To Jung, a broader and more generalized form of psychic energy.

psyche Jung's term for personality.

opposition principle Jung's idea that conflict between opposing processes or tendencies is necessary to generate psychic energy.

equivalence principle The continuing redistribution of energy within a personality; if the energy expended on certain conditions or activities weakens or disappears, that energy is transferred elsewhere in the personality.

entropy principle A tendency toward balance or equilibrium within the personality; the ideal is an equal distribution of psychic energy over all structures of the personality.

When a person invests a great deal of psychic energy in a particular idea or feeling, it is said to have a high psychic value and can strongly influence the person's life. For example, if you are highly motivated to achieve power, then you will devote most of your psychic energy to devise ways of obtaining it.

Principles of Psychic Energy

Jung drew on ideas from physics to explain the functioning of psychic energy. He proposed three basic principles: opposites, equivalence, and entropy (Jung, 1928). The **principle of opposites** can be seen throughout Jung's system. He noted the existence of opposites or polarities in physical energy in the universe, such as heat versus cold, height versus depth, and creation versus decay. So it is with psychic energy, he argued. Every wish or feeling has its opposite. This opposition—this conflict between polarities—is the primary motivator of behavior and generator of energy. The sharper the conflict between polarities, the greater the energy produced.

For his **principle of equivalence**, Jung applied the physical principle of the conservation of energy to psychic events. He stated that energy expended in bringing about some condition is not lost but rather is shifted to another part of the personality. Thus, if the psychic value in a particular area weakens or disappears, that energy is transferred elsewhere in the psyche. For example, if we lose interest in a person, a hobby, or a field of study, the psychic energy formerly invested in that area is shifted to a new one. The psychic energy used for conscious activities while we are awake is shifted to dreams when we are asleep.

The word *equivalence* implies that the new area to which energy has shifted must have an equal psychic value; that is, it should be equally desirable, compelling, or fascinating. Otherwise, the excess energy will flow into the unconscious. In whatever direction and manner energy flows, the principle of equivalence dictates that energy is continually redistributed within the personality.

In physics, the **principle of entropy** refers to the equalization of energy differences. For example, if a hot object and a cold object are placed in direct contact, heat will flow from the hotter object to the colder object until they are in equilibrium at the same temperature. In effect, an exchange of energy occurs, resulting in a kind of homeostatic balance between the objects.

Jung applied this law to psychic energy by proposing that there is a tendency toward maintaining a balance or equilibrium in the personality. If two desires or beliefs

differ greatly in intensity or psychic value, energy will flow from the more strongly held to the weaker. Ideally, the personality has an equal distribution of psychic energy over all its aspects, but this ideal state is never achieved. If perfect balance or equilibrium were attained, then the personality would have no psychic energy, because, as we noted earlier, the opposition principle requires conflict for psychic energy to be produced.

Pause for Reflection

Do any of Jung's principles about psychological energy match up with your experiences with conflict?

Aspects of Personality

Jung believed that the total personality, or psyche, is composed of several distinct systems or aspects that can influence one another.

The Ego

The **ego** is the center of consciousness, the part of the psyche concerned with perceiving, thinking, feeling, and remembering. It is our awareness of ourselves and is responsible for carrying out all the normal everyday activities of waking life. The ego acts in a selective way, admitting into conscious awareness only a portion of the stimuli to which we are exposed.

The Attitudes: Extraversion and Introversion

Much of our conscious perception of our environment, and how we react to it, is determined by the opposing mental attitudes of **extraversion** and **introversion**. Jung believed that psychic energy could be channeled externally, toward the outside world, or internally, toward the self. Extraverts are open, sociable, and socially assertive, oriented toward other people and the external world. Introverts are withdrawn and often shy, and tend to focus on themselves, on their own thoughts and feelings.

According to Jung, all of us have the capacity for both attitudes, but only one becomes dominant in our personality. The dominant attitude then tends to direct our behavior and consciousness. The nondominant attitude still remains influential, however, and becomes part of the personal unconscious, where it can affect behavior. For example, in certain situations an introverted person may display characteristics of extraversion and wish to be more outgoing, or be attracted to an extravert.

Pause for Reflection

Do you think you are more extraverted or introverted?

Psychological Functions

As Jung came to recognize that there were different kinds of extraverts and introverts, he proposed additional distinctions among people based on what he called the psychological functions. These functions refer to different and opposing ways of perceiving both the external real world and our subjective inner world. Jung posited four functions of the psyche: sensing, intuiting, thinking, and feeling (Jung, 1927).

Sensing and intuiting are grouped together as nonrational functions because they do not use the processes of reason. These functions accept experiences and do not evaluate them. Sensing reproduces an experience through the senses the way a photograph copies an object, coming directly from external stimuli. In contrast, intuiting does not arise directly from an external stimulus. For example, if we believe someone else is with us in a darkened room, our belief may be based on our intuition or a hunch rather than on actual sensory experience.

The second pair of opposing functions, thinking and feeling, are rational functions that involve making judgments and evaluations about our experiences. Although thinking and feeling are opposites according to Jung, both are concerned with organizing and categorizing experiences. The thinking function involves a conscious judgment of whether an experience is true or false. The kind of evaluation made by the feeling function is expressed in terms of like or dislike, pleasantness or unpleasantness, stimulation or dullness.

Just as our psyche contains some of both the extraversion and introversion attitudes, so do we have the capacity for all four psychological functions. Similarly, just as one attitude is dominant, only one function is dominant, Jung argued. The others are submerged in the personal unconscious. Specifically, only one pair

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ego To Jung, the conscious part of personality.

extraversion An attitude of the psyche characterized by an orientation toward the external world and other people.

introversion An attitude of the psyche characterized by an orientation toward one's own thoughts and feelings.

of functions is dominant—either the rational or the irrational—and within each pair only one function is dominant. A person cannot be ruled by both thinking and feeling or by both sensing and intuiting, because they are opposing functions.

Psychological Types

Jung proposed eight **psychological types**, based on the interactions of the two attitudes and four functions. Refer to Table 3.1.

The *extraverted thinking types* live strictly in accordance with society's rules. People high in extraverted thinking tend to repress feelings and emotions, to be objective in all aspects of life, and to be dogmatic in thoughts and opinions. They may be perceived as rigid and cold. They tend to make good scientists because their focus is on learning about the external world and using logical rules to describe and understand it.

The *extraverted feeling types* tend to repress the thinking mode and to be highly emotional. They conform to the traditional values and moral codes they have been taught and are unusually sensitive to the opinions and expectations of others. They tend to be more emotionally responsive, make friends easily, and tend to be sociable and effervescent. Jung believed this type was found more often among women than men, though there may not be empirical evidence for this claim.

Table 3.1 Jung's psychological types

Extraverted thinking	Logical, objective, dogmatic
Extraverted feeling	Emotional, sensitive, sociable
Extraverted sensing	Outgoing, pleasure seeking, adaptable
Extraverted intuiting	Creative, able to motivate others, and to seize opportunities
Introverted thinking	More interested in ideas than in people
Introverted feeling	Reserved, undemonstrative, yet capable of deep emotion
Introverted sensing	Outwardly detached, expressing themselves in aesthetic pursuits
Introverted intuiting	Concerned with the unconscious more than everyday reality

psychological types To Jung, eight personality types based on interactions of the attitudes (introversion and extraversion) and the functions (thinking, feeling, sensing, and intuiting).

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Extraverts channel the libido externally, toward the outside world.

The *extraverted sensing types* focus on pleasure and happiness and on seeking new experiences. They are strongly oriented toward the real world and are adaptable to different kinds of people and changing situations. Not given to introspection, they tend to be outgoing, with a high capacity for enjoying life.

The *extraverted intuiting types* find success in business and politics because of a keen ability to exploit opportunities. They are attracted to new ideas, tend to be creative, and are able to inspire others to accomplish and achieve. They also tend to be changeable, moving from one idea or venture to another, and to make decisions based more on hunches than on reflection. Their decisions, however, are likely to be correct.

The *introverted thinking types* do not get along well with other people and have difficulty communicating ideas. They focus on thoughts rather than feelings and have poor practical judgment. Intensely concerned with privacy, they prefer to deal with abstractions and theories, and they focus on understanding themselves rather than other people. Others see them as stubborn, aloof, arrogant, and inconsiderate.

The *introverted feeling types* repress rational thought. They are capable of deep emotion but avoid any outward expression of it. They seem mysterious and inaccessible and tend to be quiet, modest, and childish. They have little consideration for others' feelings and thoughts and appear withdrawn, cold, and self-assured.

The *introverted sensing types* appear passive, calm, and detached from the everyday world. They look on most human activities with benevolence and amusement. They are aesthetically sensitive, expressing themselves in art or music, and tend to repress their intuition.

The *introverted intuiting types* focus so intently on intuition that they have little contact with reality. They are visionaries and daydreamers—aloof, unconcerned with practical matters, and poorly understood by others. Considered odd and eccentric, they tend to have more difficulty coping with everyday life and planning for the future.

Pause for Reflection

Which of the eight personality types seem like they describe real personality profiles? Do any seem like an oversimplification or unlikely to describe real people?

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Introverts channel the libido internally, toward their inner experiences.

Assessing Personality Types: The Myers-Briggs Type Indicator

An assessment instrument related to Jung's personality theory is the **Myers-Briggs Type Indicator (MBTI)**, developed in the 1920s by Katharine Cook Briggs and Isabel Briggs Myers (Briggs & Myers, 1943, 1976). Today, the MBTI is one of the most popular and most frequently used personality tests ever devised and is taken by more than two million people every year for hiring and promotion decisions (Cunningham, 2012). In the business world, you may have to take this test to get a job or a promotion (refer to Table 3.2). Here we will describe the measure, research findings with the measure, and critiques of the measure. Despite its being widely used, fun to reflect on when taking, and popular across cultures, the MBTI is neither strongly valid nor reliable.

The test was developed in Washington, DC, by Katharine Briggs, who doted on her teenage daughter Isabel. Katharine wrote a book-length manuscript about her remarkable home-schooled daughter, calling her a genius, even a "little Shakespeare." When Isabel went to college at Swarthmore, near Philadelphia, Pennsylvania, mother and daughter corresponded almost daily. And then one day Isabel brought home a law student, Clarence Myers.

"Katharine and Isabel were bold and imaginative and intuitive. Myers was practical and logical and detail-oriented" (Gladwell, 2004, p. 45). Katharine was so shocked by the personality differences between her daughter and her future son-in-law that she embarked on an intensive program of self-study in psychology to try to understand him.

In 1923, she read Jung's book *Psychological Types,* and found what she was looking for—a way to categorize people and to explain the differences among them. And so, without any expertise, research grant support, university affiliation, or graduate students, she developed, with Isabel's help, a test to measure those differences.

In 1975, Isabel Briggs Myers and Mary McCaulley, a psychology professor at the University of Florida, established the Center for Applications of Psychological Type for MBTI training and research. In 1979, the Association for Psychological Type was founded. Two journals published research reports on applications of the test. The MBTI is considered the most visible practical outgrowth of Jung's work on the human personality, though its scientific value is questionable.

Research on Psychological Types

Despite Jung's negative opinion of experimental psychology, researchers have been able to submit some aspects of Jungian theory to experimental test, with results that are supportive of some of Jung's propositions. Most of this research uses the MBTI and focuses on the attitudes of introversion and extraversion. However, not all research supports Jung's delineation of the psychological types (Pittenger, 2005).

Studies of Students in Higher Education

One early study of college students found that their job interests were closely related to Jungian attitudes

Myers-Briggs Type Indicator (MBTI) An assessment test based on Jung's psychological types and the attitudes of introversion and extraversion that is widely used but not very valid or reliable.

Table 3.2 Sample items from the Myers-Briggs Type Indicator

Which answer comes closer to telling how you usually feel or act?

1. When you go somewhere for the day, would you rather
   (a) plan what you will do and when, or
   (b) just go?
2. Do you tend to have
   (a) deep friendships with a very few people, or
   (b) broad friendships with many different people?
3. When you have a special job to do, do you like to
   (a) organize it carefully before you start, or
   (b) find out what is necessary as you go along?
4. When something new starts to be the fashion, are you usually
   (a) one of the first to try it, or
   (b) not much interested?
5. When the truth would not be polite, are you more likely to tell
   (a) a polite lie, or
   (b) the impolite truth?

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and psychological types (Stricker & Ross, 1962). Introverts demonstrated strong interests in occupations that did not involve personal interaction, such as technical and scientific work. Extraverts were more interested in jobs that offered high levels of social interaction, such as sales and public relations. Other research found that introverted feeling and judging types had higher grade point averages than the other psychological types (DiRienzo et al., 2010).

Different psychological types may be drawn to different professions (Hanewitz, 1978). The MBTI was given to a large sample of police officers, schoolteachers, and social work and dental school students. The teachers and social work students showed high levels of intuiting and feeling. Police officers and dental school students, who deal with people in different ways from teachers and social workers, scored high in extraversion and in sensing and thinking.

College students who scored high in intuiting were inclined toward more creative vocational interests. Those who scored high in sensing favored more conventional vocational interests (Apostal, 1991).

In research with medical school students investigating learning styles in Italy, researchers found that students who scored high in sensing preferred concrete, hands-on experiences, whereas students who scored high in intuiting preferred more abstract, ideas-oriented conceptualizations (Settineri et al., 2018). Students who were highly thinking preferred reflective observation, in contrast to students high in feeling, who disliked reflective observation and, like those high in intuiting, preferred abstract conceptualization. MBTI scores of medical school students demonstrated that those who became primary care physicians scored high in feeling and introversion. Those who became surgeons had been labeled extraverted and thinking types (Stilwell et al., 2000).

A study of women admitted to the U.S. Naval Academy who took the MBTI found that the extraverted-sensing-thinking-judging types were the most likely to graduate. In contrast, the women most likely to drop out scored higher in feeling and perceiving (Murray & Johnson, 2001). A 10-year research program with students at liberal arts colleges also found that those most likely to drop out before graduation scored high on the MBTI in perceiving (Barrineau, 2005).

In another sample of college students who took the MBTI, extraverts scored higher than introverts in psychological well-being and general life satisfaction (Harrington & Loffredo, 2001).

Studies of Cognitive Functioning Jungian personality types appear to differ in their cognitive or mental functioning. People categorized as introverted-thinking types tend to have better memories for neutral or impersonal stimuli, such as numbers. Persons labeled extraverted-feeling types have better memories for human stimuli with emotional overtones, such as facial expressions (Carlson & Levy, 1973). It was also found that brain wave activity, as measured by an electroencephalogram (EEG), differed for each of the psychological types, as assessed by the MBTI (Gram et al., 2005).

Also, introverted-thinking and extraverted-feeling types may differ in their ability to recall significant personal experiences (Carlson, 1980). When participants were asked to recall their most vivid experiences involving such emotions as joy, anger, and shame, extraverted-feeling types most often reported memories involving other people. Introverted-thinking types more frequently recalled events that occurred when

they were alone. In addition, extraverted-feeling types recalled highly emotional details, whereas introverted-thinking types remembered more emotionally neutral and factual experiences. Research on personality and various facets of cognition have largely moved beyond using the MBTI to more reliable and valid measures, which we will explore in subsequent chapters.

Studies of Diverse Cultures The MBTI has been translated for use in a number of different countries, including, for example, Italy, Poland, Indonesia, Korea, Israel, Iran, Turkey, Syria, and other Arab countries (Atay, 2012; Ayoubui & Ustwani, 2014). A study of Muslims living in England found that "within a Muslim context religious participation is associated with extraversion rather than introversion and with thinking rather than feeling" (Francis & Datoo, 2012, p. 1037). A study of Greek Orthodox churchgoers living in London found that they scored high in introversion, sensing, thinking, and judging (Lewis et al., 2012). Research on women college students in Israel found that extraverts and feeling types scored higher on measures of happiness than introverts and thinking types (Francis et al., 2013).

Among college students in Singapore, extraverts preferred to communicate with other people in person, whereas introverts preferred online contacts (Goby, 2006). When students in Bulgaria (ages 13–16) were given the MBTI, the results showed that those who scored high on intuiting and sensing had greater self-esteem. Those who scored low on sensing and judging had lower self-esteem (Papazova & Pencheva, 2008).

Research on junior and mid-level managers in India found that those who scored very high on the thinking function tended to be collaborative in their efforts to manage conflict. Those who scored high in feeling tended to avoid dealing with conflicts. The men in this study scored higher on thinking, whereas the women scored higher on feeling (Mathew & Bhatewara, 2006).

A study of managers in China, however, did not find any significant differences between men and women in scores on the MBTI (Huifang & Shuming, 2004). Additional research on managers in China found that their MBTI scores were much more similar to the scores of managers in the United States than to the general population in China (Yang & Zhao, 2009).

Perhaps not surprisingly, a study of Australians and Canadians found that the fundamental motivating feature for people who scored high in extraversion was the social attention their behavior brought them (Ashton et al., 2002).

Criticisms of the MBTI Although the Myers-Briggs Type Indicator is widely known and often used, it is a seriously flawed personality assessment tool, especially for making conclusions about people's "true" selves, tendencies to engage in certain behaviors, or to make workplace decisions (see Pittenger, 2005; Stein & Swan, 2019). A classic critique still stands: "It is clear that efforts to detect simplistic linkages between type preferences and managerial effectiveness have been disappointing. Indeed, given the mixed quality of research and the inconsistent findings, no definitive conclusion regarding these relationships can be drawn" (Gardner & Martinko, 1996). Bjork and Druckman (1991) and Boyle (1995) came to similar conclusions, as have more recent reviews of research done with the MBTI (Pittenger, 2005; Stein & Swan, 2019).

There is no evidence that the MTBI is a better predictor of personality than other measures. It is also unclear what the MTBI does measure since it asks people about their *preferences* rather than their actual *thoughts*, *feelings*, and, essentially, *behavior.* The measure also problematically treats types as separate rather than two ends of one spectrum. Take introversion and extraversion: Most people are somewhere in the middle of extremely introverted and extremely extraverted, may be more of one or more of the other, but still a combination, as they are two endpoints of a continuum. Yet, the MTBI labels people as one or the other, which does not give accurate information on an individual's *level* of that trait like a score between 1 and 7 would. These issues may result in the test's poor validity and reliability. With respect to low validity, the personality types according to the MBTI are poor predictors of, for example, how well or the style in which people accomplish goals and work with others in their occupations. With respect to its low reliability, the same person who takes the test multiple times can get different personality types each time, so there is low test–retest reliability. There are also problems with the measure according to more technical tests, such as the distribution of scores and factor structure (how the items of the measure capture underlying constructs).

Pittenger (2005, p. 219) writes, "The four-letter type formula may also be an overly simplistic account of complex personality dynamics and leave the recipient with a false impression that there is little left to doubt." Why then is the MBTI so popular? For one, the simplistic four-letter type is easy to understand, and people feel good when they feel they can understand and categorize themselves in an intuitive way. Additionally, the publishers of the MBTI have invested a lot in a wide-reaching marketing campaign and translating the

measure into many languages so people all over the world can use it. In sum, the MBTI is not highly valid or reliable in measuring "true" personality, so research with the tool should be interpreted carefully.

Pause for Reflection

In considering how you try to understand other people in day-to-day life, what aspects of the MBTI seem helpful and unhelpful in identifying others' personalities?

The Personal Unconscious

The **personal unconscious** in Jung's system is similar to Freud's concept of the preconscious. It is a reservoir of material that was once conscious but has been forgotten or suppressed because it was trivial or disturbing. There is considerable two-way traffic back and forth between the ego and the personal unconscious. For example, your attention might wander away from this page to a memory of something you did yesterday. All kinds of experiences are stored in the personal unconscious, which has been likened to a filing cabinet. Little mental effort is required to take something out, examine it for a while, and then put it back, where it will remain until the next time we want it or are reminded of it.

Complexes

As we file more and more experiences in our personal unconscious, we begin to group them into what Jung called **complexes**. A complex is a core or pattern of emotions, memories, perceptions, and wishes organized around a common theme. For example, we might say that some people have a complex about power or status, meaning that they are preoccupied with that theme to the point where it influences behavior. They might try to become powerful by running for elected office, or to identify or affiliate with power by driving a motorcycle or a fast car. By directing thoughts and behavior in various ways, the complex determines how that person perceives the world.

Complexes may be conscious or unconscious. Those that are not under conscious control can intrude on and interfere with consciousness. The person with a complex is generally not aware of its influence, although other people may easily observe its effects.

Some complexes may be harmful, but others can be useful. For example, a perfection or achievement complex may lead a person to work hard at developing particular talents or skills. Jung believed that complexes originate not only from our childhood and adult experiences but also from our ancestral experiences, the heritage of the species contained in the collective unconscious.

personal unconscious The reservoir of material that was once conscious but has been forgotten or suppressed.

complex To Jung, a core or pattern of emotions, memories, perceptions, and wishes in the personal unconscious organized around a common theme, which drive behavior.

collective unconscious The deepest level of the psyche containing the accumulation of inherited experiences of human and prehuman species.

The Collective Unconscious

The deepest and least accessible level of the psyche, the **collective unconscious**, is the most unusual and controversial aspect of Jung's system. Jung believed that just as each of us accumulates and files all of our personal experiences in the personal unconscious, so does humankind collectively, as a species, store the experiences of all our human and prehuman ancestors in the collective unconscious. This heritage is passed to each new generation.

He believed that whatever experiences are universal—that is, are repeated by each generation—become part of our personality. Our primitive past thus becomes the basis of the human psyche, directing and influencing our present behavior. To Jung, the collective unconscious was the powerful and controlling repository of ancestral experiences. Thus, Jung linked the personality of each of us with the past, not only with childhood but also with the history of the species.

We do not inherit these collective experiences directly. For example, we do not inherit a fear of snakes. Rather, we inherit the potential to fear snakes. We are predisposed to behave and feel the same ways people have always behaved and felt. Whether the predisposition becomes reality depends on the specific experiences we encounter in life.

Jung believed that certain basic experiences have characterized every generation throughout human history. People have always had a mother figure, for example, and have experienced birth and death. They have faced unknown terrors in the dark, worshipped power or some sort of godlike figure, and feared an evil being. The universality of these experiences over countless evolving generations leaves an imprint on each of us at birth and determines how we perceive and react to our world. Jung wrote, "The form of the world into which

[a person] is born is already inborn in him, as a virtual image" (Jung, 1953, p. 188).

A baby is born predisposed to perceive the mother in a certain way. If the mother behaves the way mothers typically behave, in a nurturing and supportive manner, then the baby's predisposition will correspond with its reality.

Because the collective unconscious is such an unusual concept, it is important to note the reason Jung proposed it and the kind of evidence he gathered to support it. In his studies of ancient cultures, both mythical and real, Jung discovered what he believed to be common themes and symbols that appeared in diverse parts of the world. As far as he could determine, these ideas had not been transmitted or communicated orally or in writing from one culture to another.

In addition, Jung's patients, in their dreams and fantasies, recalled and described the same kinds of symbols he had discovered in ancient cultures. He could find no other explanation for these shared symbols and themes over such vast geographical and temporal distances than that they were transmitted by and carried in each person's unconscious mind.

Archetypes

The ancient experiences contained in the collective unconscious are manifested by recurring themes or patterns, which Jung called **archetypes** (Jung, 1947). He also used the term *primordial images*. There are many such images, as many as there are common human experiences. By being repeated in the lives of succeeding generations, archetypes have become imprinted in our psyches and are expressed in our dreams and fantasies.

Among the archetypes Jung proposed are the hero, the mother, the child, God, death, power, and the wise old man. A few of these are developed more fully than others and influence the psyche more consistently. These major archetypes include the persona, the anima and animus, the shadow, and the self.

The Persona

The word *persona* refers to a mask that an actor wears to display various roles or faces to the audience. Jung used the term with basically the same meaning. The **persona archetype** is a mask, a public face we wear to present ourselves as someone different from who we really are. The persona is necessary, Jung believed, because we are forced to play so many roles in life in order to succeed in school and on the job and in getting along with a variety of people.

Although the persona can be helpful, it can also be harmful if we come to believe that it reflects our true nature. Instead of merely playing a role, we may then become that role. As a result, other aspects of our personality will not be allowed to develop. When this happens, the ego may come to identify with the persona rather than with the person's true nature, resulting in a condition known as *inflation* of the persona. Whether the person plays a role or comes to believe that role, they are resorting to deception. In the first instance, the person is deceiving others; in the second instance, the person is deceiving themself.

The Anima and Animus

The anima and animus archetypes refer to Jung's recognition that humans have psyches that reflect both masculine and feminine aspects. According to Jung, men have access to traditionally feminine psychology because of the women represented in the shared unconscious (e.g., mothers, daughters, sisters), and women have access to traditionally masculine psychology because of the men represented in the shared unconscious (e.g., fathers, sons, brothers). Individuals are thought to be able to access these other-sex archetypes because of human history as well as the individual's own experiences with diversely gendered people. The psyche of the woman contains masculine aspects (the **animus archetype**), and the psyche of the man contains feminine aspects (the **anima archetype**), according to Jung. (Refer to Figure 3.1.)

Jung argued that these opposite sex characteristics aid in the adjustment and survival of the species because they enable a person of one sex to understand the nature of the other sex. The archetypes predispose us to like certain characteristics of the opposite sex and guide our behavior with reference to the opposite sex.

Jung insisted that both the anima and the animus must be expressed. A man must exhibit his feminine as well as his masculine characteristics, and a woman must express her masculine characteristics along with her feminine ones. Otherwise, these vital aspects will remain dormant and undeveloped, leading to a one-sidedness of the personality. Though Jung did not distinguish between sex and gender as we do in modern society, he was ahead of his time in highlighting the importance of

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archetypes Images of universal experiences contained in the collective unconscious.

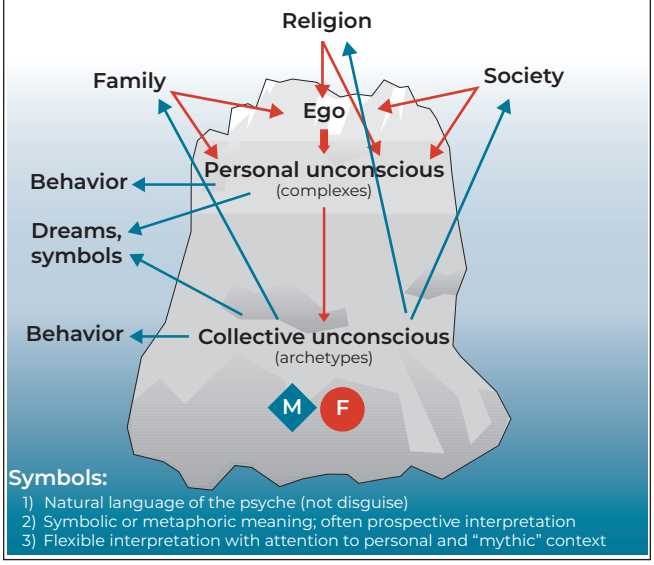
persona archetype The public face or role a person presents to others.

animus archetype Masculine aspects of women's psyche.

anima archetype Feminine aspects of men's psyche.

Figure 3.1

Jung's model of the psyche (or personality)



Source: https://uregina.ca/~lawlorda/jung/jung.htm

rejecting the rigid gender-role-based expectations that it is best for women to behave only "femininely" and men to behave only "masculinely."

The Shadow The most powerful archetype has the sinister and mysterious name of the **shadow archetype**, which contains the basic, primitive animal instincts and therefore has the deepest roots of all archetypes. Behaviors that society considers evil and immoral reside in the shadow, such as selfishness, and this dark side of human nature must be tamed if people are to live in harmony. We must at all times restrain, overcome, and defend against these primitive impulses. If not, society will very likely punish us.

But that presents us with a dilemma because not only is the shadow the source of evil, it is also the source of vitality, spontaneity, creativity, and emotion. Therefore, if the shadow is totally suppressed, the psyche will be dull and lifeless. It's the job of the ego to repress the animal instincts enough so that we are considered civilized, while allowing sufficient expression of the instincts to provide creativity and vigor.

shadow archetype The dark side of the personality; the archetype that contains primitive animal instincts.

self archetype To Jung, the archetype that represents the unity, integration, and harmony of the total personality.

If the shadow is fully suppressed, not only does the personality become flat, but the person also faces the possibility that the shadow will revolt. The animal instincts do not disappear when they are suppressed. Rather, they lie dormant, waiting for a crisis or a weakness in the ego so they can gain control. When that happens, the person becomes dominated by the unconscious, which is not a good thing.

The Self The **self archetype** represents the unity, integration, and harmony of the total personality. To Jung, striving toward that wholeness is the ultimate goal of life. This archetype involves bringing together and balancing all parts of the personality. We have already noted Jung's principle of opposites and the importance of polarities to the psyche. In the self archetype, the opposites of conscious and unconscious processes must become assimilated so that the self, which is the center of the personality, shifts from the ego to a point of equilibrium midway between the opposing forces of the conscious and the unconscious. As a result, material from the unconscious comes to have a greater influence on the personality.

The full realization of the self lies in the future. It is a goal—something to always strive for but that is rarely achieved. The self serves as a motivating force, pulling us from ahead rather than pushing us from behind (as our past experiences do).

The self cannot begin to emerge until all the other systems of the psyche have developed. This occurs around middle age, a crucial period of transition in Jung's system, as it was in his own life. The actualization of the self involves goals and plans for the future and an accurate perception of one's abilities. Because development of the self is impossible without self-knowledge, it is the most difficult process we face in life and requires persistence, perceptiveness, and wisdom.

Pause for Reflection

What roles have complexes and archetypes played in your personality development?

The Development of the Personality

Jung believed that personality is determined by what we hope to be as well as by what we have been in the past and by what happened to us then. He criticized Freud for emphasizing only past events as important for personality development, to the exclusion of

Table 3.3 Jung's developmental stages

Childhood	Ego development begins when the child distinguishes between self and others.
Puberty to young adulthood	Adolescents must adapt to the growing demands of reality. The focus is external, on education, career, and family. The conscious is dominant.
Middle age	A period of transition when the focus of the personality shifts from external to internal in an attempt to balance the unconscious with the conscious.

the future. Jung believed we develop and grow regardless of age and are always moving toward a more complete level of self-realization (refer to Table 3.3).

Jung focused on a longer trajectory of personality than Freud, who concentrated on the early years of life and foresaw little development after the age of 5. Jung did not posit sequential stages of growth in as much detail as Freud, but he wrote of two general periods in the overall developmental process: childhood to young adulthood (which included childhood and puberty to young adulthood) and middle age (Jung, 1930).

Childhood to Young Adulthood

The ego begins to develop in early childhood, at first in a primitive way because the child has not yet formed a unique identity. What might be called children's personalities are, at this stage, little more than a reflection of the personalities of their parents. Obviously, then, parents exert a great influence on the formation of the child's personality. They can enhance or impede personality development by the way they behave toward their child.

Parents might try to force their own personalities on their children, wanting them to be an extension of themselves. Or they might expect their children to develop personalities quite different from their own as a way of seeking vicarious compensation for their own deficiencies. The ego begins to form substantively only when children become able to distinguish between themselves and other people or objects in their world. In other words, consciousness forms when the child is able to say "I."

It is not until puberty that the psyche assumes a definite form and content. This period, which Jung called our psychic birth, is marked by difficulties and the need to adapt. Childhood fantasies must end as the adolescent confronts the demands of reality. From the teenage years through young adulthood, we are concerned with preparatory activities such as completing our education, beginning a career, getting married, and starting a family.

Our focus during these years is external, our conscious is dominant, and, in general, our primary conscious attitude is that of extraversion. The aim of life is to achieve our goals and establish a secure, successful place for ourselves in the world. Young adulthood should be an exciting and challenging time, filled with new horizons and accomplishments. Thus, we can distinguish two parts of this first one: childhood and puberty to young adulthood.

Middle Age

Jung believed that major personality changes occur between the ages of 35 and 40. (Though, with modern lifespans extending further, we can consider middle age to be between 40 and 60.) This period of middle age was the time of personal crisis for Jung and for many of his patients. By that age, the adaptation problems of young adulthood have usually been resolved. The typical 40-year-old in Jung's time was established in a career, a marriage, and a community. Jung asked why, when success has been achieved, so many people that age are gripped by feelings of despair and worthlessness. His patients told him essentially the same thing: They felt empty. Adventure, excitement, and zest had disappeared. Life had lost its meaning.

The more Jung analyzed this period, the more strongly he believed that such drastic personality changes were inevitable and universal. Middle age is a natural time of transition in which the personality is supposed to undergo necessary and beneficial changes. Ironically, the changes occur because middle-aged people have been so successful in meeting life's demands. They had invested a great deal of energy in the preparatory activities of the first half of life, but by age 40 that preparation was finished and those challenges had been met. Although they still possess considerable energy, it now has nowhere to go, and so, Jung believed, it has to be rechanneled into different activities and interests.

Jung noted that in the first half of life we must focus on the objective world of reality—education, career, and family. In contrast, the second half of life must be devoted to the inner, subjective world that heretofore had been neglected. The attitude of the personality must shift from extraversion to introversion. The focus on consciousness must be tempered by an awareness of the unconscious. Our interests must shift from the physical and material to the spiritual, philosophical, and intuitive. A balance among all facets of the personality must replace the previous exclusive focus on consciousness.

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Reaching middle age may entail a crisis, but we can reach harmony in our personality—individuation—such that older age has new meaning.

Thus, at middle age we must begin the process of realizing or actualizing the self. If we are successful in integrating the unconscious with the conscious, then we are in a position to attain a new level of positive psychological health, which Jung called individuation.

Researchers examined objective and subjective measures of well-being and success in 500,000 middle-aged people, men and women from diverse, though mostly Western, countries (Australia, Austria, Belgium, Canada, Denmark, England, Finland, Finland, France, Ireland, the Netherlands, New Zealand, Norway, Spain, Scotland, Sweden, Switzerland, USA, and Wales). Although people were making the most money they would in their lives, were relatively healthy, and lived in some of the safest and most prosperous countries and times in history, the researchers also found higher levels of psychological distress, including depression, sleep problems, concentration and memory deficits, job stress, headaches, and even suicidal feelings and acts (Giuntella et al., 2023).

Jung, and others who have studied this so-called midlife crisis, initially viewed it as a phenomenon far more likely to affect men than women, but research suggests that women also experience changes in meaning during this time. Women at midlife who experienced more stressful changes in their lives reported lower levels of satisfaction with their lives (Darling et al., 2012). But not all women have the same experiences; for example, gay women face different challenges than straight women, and White women have less positive self-views than Black women at this time (Brown et al., 2005; Howell & Beth, 2004). A survey of women in their 50s found that women viewed the early 40s as the time of greatest conflict (Helson, 1992). This might have to do with the conflict women are likely to experience over choosing whether to focus more on family or their careers or the difficulties that come with balancing both (e.g., Carr, 2004; Levinson, 1996).

individuation A condition of psychological health resulting from the integration of all conscious and unconscious facets of the personality, or self-fulfillment.

Individuation: How to Reach Fulfillment

Simply stated, **individuation** involves becoming a full individual, fulfilling one's capacities, and developing one's self. Jung argued the tendency toward individuation is innate and inevitable, but it can be helped or hindered by environmental forces, such as one's educational and economic opportunities and the nature of the parent–child relationship. There are several stages or steps through which we must proceed before we can reach Jung's ideal of self-fulfillment.

Confront the Unconscious

To strive for individuation, middle-aged people must abandon the behaviors and values that guided the first half of their lives and confront their unconscious, bringing it into conscious awareness and accepting what it tells them to do. They must listen to their dreams and follow their fantasies, exercising creative imagination through writing, painting, or some other form of expression. They must let themselves be guided not by the rational thinking that drove them before but by the spontaneous flow of the unconscious. Only in that way can the true self be revealed.

Jung cautioned that admitting unconscious forces into conscious awareness does not mean being dominated by them. The unconscious forces must be assimilated and balanced with the conscious. At this time of life, no single aspect of personality should dominate. A psychologically healthy middle-aged person is no longer ruled by either consciousness or unconsciousness, by a specific attitude or function, or by any of the archetypes. All are brought into harmonious balance when individuation is achieved.

Dethrone the Persona

Of particular importance in the midlife process of individuation is the shift in the nature of the archetypes. The first change involves dethroning the persona. Although we must continue to play various social roles if we are to function in society and get along with different kinds of people, we must recognize that our

public personality may not represent our true nature. Further, we must come to accept the genuine self that the persona has been covering.

Accept Our Dark Sides

Next, we become aware of the destructive forces of the shadow and acknowledge that dark side of our nature with its primitive impulses, such as selfishness. That does not mean that we submit to them or allow them to dominate us, but simply accept their existence. In the first half of life, we use the persona to shield this dark side from ourselves, wanting people to see only our good qualities. But in concealing the forces of the shadow from others, we also conceal them from ourselves. That must change as part of the process of learning to know ourselves. A greater awareness of both the destructive and the constructive aspects of the shadow will give the personality a deeper and fuller dimension because the shadow's tendencies bring zest, spontaneity, and vitality to life.

Once again, we see this central theme in Jung's individuation process, that we must bring each aspect of the personality into harmony with all other aspects. Awareness of only the good side of our nature produces a one-sided development of the personality. As with other opposing components of personality, both sides of this dimension must be expressed before we can achieve individuation.

Accept Our Anima and Animus

We must also come to terms with our psychological connection to both the feminine and the masculine. A man must be able to express his anima archetype, or stereotypically feminine traits such as tenderness, and a woman must come to express her animus, or stereotypically masculine traits such as assertiveness. Jung believed that this recognition of the characteristics of the other sex was the most difficult step in the individuation process because it represents the greatest change in our self-image. Accepting the emotional qualities of both men and women opens new sources of creativity and serves as the final release from parental influences.

Transcend

Once the psyche's structures are individuated and acknowledged, the next developmental stage can occur. Jung referred to this as transcendence, an innate tendency toward unity or wholeness in the personality, uniting all the opposing aspects within the psyche. Environmental factors, such as an unhappy romantic relationship or a frustrating job, can inhibit the process of transcendence and prevent the full achievement of the self.

Research on Individuation

Research with Indian adults suggests that individuation, understood as mature self-concept, ego strength, and inner directedness, is associated with strong self-regulation and self-efficacy (Singh, 2016). An intensive investigation of men and women, aged 37 to 55, who held senior executive positions found that they displayed behaviors that corroborate Jung's concept of individuation. The study involved interviews with the executives, their colleagues, and their family members as well as observations of their behavior on the job. They were also evaluated via the TAT, the MBTI, and the Adjective Check List. The researcher concluded that the executives "looked within [themselves] for direction and energy, questioned their inherited values, relinquished outmoded aspects of their selves, revealed new dimensions of who they are, and allowed themselves to be more playful and spontaneous" (Lyons, 2002, p. 9). The executives also took actions according to their own wishes and desires instead of simply reacting to external demands and pressures. These behavioral and emotional characteristics correspond to Jung's description of the individuation process.

Similarly, another study with adults between 38 and 72 years old from North America, Europe, Africa, and Australia investigated vocation and meaning in life. Analysis of in-depth interviews revealed that individuals who reflected inward toward their psyche, acknowledged their shadow, and grappled with their persona came out of the process with a clearer sense of what career would give them the most meaning in the second part of their lives (Cremen, 2019).

A longitudinal study on individuation in women followed participants for 20 years after they graduated from college (John et al., 1998). The results demonstrated that the personalities of the women at midlife, based on ratings by independent judges, could be divided into three levels or prototypes: conflicted, traditional, and individuated. The lowest level, the conflicted prototype, was characterized by personal conflicts, psychological problems, poor relationships with others, anxiety, hostility, and rigidity. The women at this level were considered to be psychologically immature.

The second level, the traditional prototype, was characterized by devotion to others, feelings of guilt, an emphasis on fulfilling duties and obligations at the expense of their own self-development and self-expression, and a concern for societal standards and getting the approval of others. They were also

described as competent adults and good citizens who focused on marriage rather than career but lacked a high degree of psychological maturity and self-understanding.

The third level, the individuated prototype, corresponds to Jung's concept of individuation, the ideal outcome of the midlife personality crisis. Women at this level were described as high in autonomy, creativity, responsiveness and closeness to others, self-actualization, individual achievement orientation, empathy, tolerance, ego resilience, and intellectual and cultural sophistication. Thus, people vary in how successfully they reach self-fulfillment.

How well we are able to integrate our unconscious and our conscious, to strike the balance, perhaps by making big changes in our lives, varies. Studies of women in the United States and in Australia confirmed that for some, middle age is a time of increasing personal growth, moving in new directions, ridding themselves of past problems, and experiencing the freedom to be themselves (Arnold, 2005; Leonard & Burns, 2006).

Jung's theory has been applied in ways that may help adults even past middle age to find psychological health. A systematic review of qualitative research that summarized five in-depth studies found that older adults may live more fulfilling lives if they access their unconscious (especially for those with dementia), contact past experiences and emotion, interpret their dreams, face mortality, go through the individuation process, and engage in analytic psychological therapy (Morbach & Pedroso, 2022).

Pause for Reflection

How might your life goals change from now to midlife? How might you find new meaning?

Questions About Human Nature

Jung's view of human nature is quite different from Freud's. Jung did not hold such a deterministic perspective, but he did agree that personality may be at least partly determined by childhood experiences and by the archetypes. However, there is ample room in Jung's system for free will and spontaneity, the latter arising from the shadow archetype.

On the nature–nurture issue, Jung took a mixed position. The drive toward individuation and transcendence is innate, but it can be aided or thwarted by learning and experience. The ultimate and necessary goal of life is the realization of the self. Although it is rarely achieved, we are continually motivated to strive for it.

Jung disagreed with Freud on the importance of childhood experiences. Jung thought they were influential but did not completely shape our personality by age 5, which Freud believed. We are affected more by our experiences in middle age and by our hopes and expectations for the future.

Each individual is unique, in Jung's theory, but only during the first half of life. When some progress toward individuation is made in middle age, we develop what Jung designated as a universal kind of personality in which no single aspect is dominant. Thus, uniqueness disappears, and we can no longer be described as having a dominant personality type.

Jung presented a more positive, hopeful image of human nature than Freud did, and his optimism is apparent in his view of personality development. We are motivated to grow and develop, to improve and extend ourselves. Progress does not stop in childhood, as Freud had assumed, but continues throughout life. Jung believed that we always have the hope of becoming better. Jung argued that the human species also continues to improve. Present generations represent a significant advance over our primitive ancestors.

Despite his basic optimism, Jung expressed concern about a danger he saw facing Western culture. He referred to this danger as a sickness of dissociation. By placing too great an emphasis on materialism, reason, and empirical science, we are in danger of failing to appreciate the forces of the unconscious. We must not abandon our trust in the archetypes that form our heritage. Thus, Jung's hopefulness about human nature was a watchful, warning kind.

Assessment in Jung's Theory

Jung, like Freud, used the case study method, which Jung called **life-history reconstruction**. It involved an extensive recollection of a person's past experiences in which Jung sought to identify the developmental patterns that led to a patient's present state. The criticisms of Freud's data and research methods also apply to Jung's work. Jung's data did not rely on objective observation and were not gathered in a controlled and systematic fashion. Also, the situations

life-history reconstruction Jung's type of case study that involves examining a person's life experiences to identify developmental patterns that may explain present neuroses.

in which they were obtained, the clinical interviews, were not amenable to replication, verification, or quantification.

Like Freud, Jung did not keep verbatim records of his patients' comments, nor did he attempt to verify the accuracy of their reports. Jung's case studies involved (as did Freud's) a small, nonrepresentative sample of people, making it difficult to generalize to the population at large.

Jung's analysis of the data was subjective and unreliable. We do not know how he analyzed his data because he never explained his procedures. It is obvious that the data were subjected to some of the most unusual interpretations of any personality theory. We noted earlier that Jung studied a variety of cultures and disciplines. It was on this basis, and that of his own dreams and fantasies, that he interpreted the information gathered from his patients, rather than from scientific experimentation. Jung himself was indifferent to this criticism and commented that anyone who "wishes to know about the human mind will learn nothing, or almost nothing, from experimental psychology" (quoted in Ellenberger, 1970, p. 694).

It is also alleged that his visions, which he claimed to have experienced during his midlife confrontation with his unconscious, can be traced to the material he had read (Noll, 1993, 1994).

Jung's techniques for assessing the functioning of the psyche drew on studies of religion, anthropology, and history. He investigated a variety of cultures and eras, studying their symbols, myths, and rituals. Despite his stated opposition to the scientific method and his infrequent use of it, the work that first brought Jung to the attention of psychologists in the United States involved empirical and physiological assessments. His techniques were an unorthodox blend of opposites—supernatural and some empirical work—which is not surprising for a theory based on a principle of opposition.

Jung's Assessments of His Patients

Jung's sessions with patients were unusual and often chaotic. His patients did not lie on a couch. "I don't want to put the patient to bed," he remarked. Usually, Jung and the patient sat in comfortable chairs facing each other, although sometimes Jung faced a window so he could look out at the lake near his house. Occasionally, he took patients out on his sailboat.

One patient recalled that Jung "paced back and forth, gesturing as he talked, whether about a human problem, a dream, a personal reminiscence, an allegorical story, or a joke. Yet, he could become quiet, serious, and extremely personal, sitting down almost too close for comfort and delivering a pointed interpretation of one's miserable personal problem so its bitter truth would really sink in" (quoted in Bair, 2003, p. 379).

Sometimes Jung could be rude. When one patient appeared at the appointed time, he said, "Oh no. I can't stand the sight of another one. Just go home and cure yourself today" (quoted in Brome, 1981, pp. 177, 185). When a patient began to talk about her mother, a topic Freud would have encouraged, Jung silenced her abruptly: "Don't waste your time" (Bair, 2003, p. 379).

Jung believed that his patients' fantasies were real to them, and he accepted them at face value. When Marie-Louise von Franz (1915–1998), who later became a psychologist who studied Jungian psychological theory, first met Jung, he told her about a patient who lived on the moon. She replied that surely Jung meant the patient *acted* as though she lived on the moon. Jung said no, the woman truly did live on the moon. Von Franz decided that "either [Jung] was crazy or I was" (obituary for Marie-Louise von Franz, 1998).

Three more formal techniques Jung used to evaluate personality were the word-association test, symptom analysis, and dream analysis. As reviewed previously, a widely used self-report personality test, the Myers-Briggs Type Indicator, was developed later by Isabel Briggs Myers and Katharine Cook Briggs to assess Jung's psychological types.

Word Association

The **word-association test**, in which a subject responds to a stimulus word with whatever word comes immediately to mind, has become a laboratory and clinical tool in psychology. In the early 1900s, Jung used the technique with a list of 100 words he believed were capable of eliciting emotions (refer to Table 3.4). Jung measured the time it took for a patient to respond to each word. He also noted physiological reactions to determine the emotional effects of the stimulus words.

Jung used word associations to uncover complexes in his patients. A variety of factors indicated the presence of a complex, including physiological responses, delays in responding, making the same response to different words, slips of the tongue, stammering, responding with more than one word, making up words, or failing to respond.

word-association test A projective technique in which a person responds to a stimulus word with whatever word comes to mind.

Table 3.4 "Normal" and "neurotic" responses to Jung's word-association test

Stimulus Word	Neutral Response	Neurotic Response
Blue	Pretty	Color
Tree	Green	Nature
Bread	Good	To eat
Lamp	Bright	To burn
Rich	Beautiful	Money; I don't know
To sin	Much	This idea is totally alien to me; I do not acknowledge it
Needle	To prick	To sew
To swim	Healthy	Water

Source: Jung, C. G. (1909/1973). The association method. In *The collected works of C. G. Jung* (Vol. 2, pp. 442–444). Princeton, NJ: Princeton University Press. Used by permission.

Modern investigations of Jung's word-association test have explored what parts of the brain are activated during the task. In one study, brain activity during responses that indicate complexes or neuroses were compared to brain activity during neutral responses in Jungian analysts (psychologists, psychiatrists, psychotherapists, and counselors) in Australia and New Zealand (Petchkovsky et al., 2013). For complexes or neurotic versus neutral response, there was activity in mirror neurons that reflect perspective taking and empathy, in the anterior insula that corresponds to both self-awareness and emotional empathy, and in the cingulate gyrus, which can reflect self-awareness and conflict-monitoring processes. In a similar study that focused on undergraduate and graduate students in the United States, researchers studied brain activity associated with responses to words that are thought to trigger neurotic complexes (Escamilla et al., 2018). Brain regions that were activated more for the complex-triggering words than other words included the right prefrontal cortex, supplementary motor area cortex, left temporal cortex, and the caudate and cingulate gyrus. The authors explain that these brain regions entail two circuits: one circuit included regions that play a role in episodic memory, somatic responses, and the experience of uncertainty; the other included regions that play a role in episodic memory, emotion, visual and language association, and meanings of symbols.

symptom analysis Similar to catharsis, the symptom analysis technique focuses on the symptoms reported by the patient and attempts to interpret the patients' free associations to those symptoms.

dream analysis A technique involving the interpretation of dreams to uncover unconscious conflicts.

Symptom Analysis

Symptom analysis focuses on the symptoms reported by the patient and is based on the person's free associations to those symptoms. It is similar to Freud's cathartic method. Specifically, the analyst invites the patient to describe the memories that underlie the symptoms identified. Often, the analyst hypnotized the patient to ease the sharing of memories that might be traumatic. Between the patient's associations to the symptoms and the analyst's interpretation of them, the symptoms will often be relieved or disappear, Jung believed.

Dream Analysis

Jung agreed with Freud that dreams are the "royal road" into the unconscious. Jung's approach to **dream analysis** differed from Freud's. Jung was concerned with more than the causes of dreams, and he believed that dreams were more than unconscious wishes. First, Jung argued, dreams are prospective; that is, they help us prepare for experiences and events we anticipate will occur. Second, dreams are compensatory; they help bring about a balance between opposites in the psyche by compensating for the overdevelopment of any one psychic structure.

Instead of interpreting each dream separately, as Freud did, Jung worked with a series of dreams reported by a patient over a period of time. In that way, Jung believed he could discover recurring themes, issues, and problems that persisted in the patient's unconscious.

Jung also used amplification to analyze dreams. In Freudian free association, the patient begins with one element in a dream and develops a chain of associations from it by reporting related memories and events. Jung focused on the original dream element and asked the patient to make repeated associations and responses to it until he detected a theme. He did not try to distinguish between manifest and latent dream content, as Freud did.

In research on dreams focusing on the occurrence of archetypes, participants were asked to recall their most recent dream, their most vivid dream, and their earliest dream over a period of 3 weeks (Cann &

Donderi, 1986). They also responded to the MBTI and another personality test. Introverts were more likely than extraverts to recall everyday dreams that did not reflect archetypes. Intuiting types recalled more archetypal dreams than did sensing types. Persons who scored high in neuroticism recalled fewer archetypal dreams than those who scored low in neuroticism. The researchers concluded that these findings agreed with predictions made on the basis of Jung's personality theory.

Similarly, in a study of over 400 college students in China, introverts more than extraverts dreamed with more emotional intensity and passive emotions and had more distressing nightmares (Zhao et al., 2020). Extraverts, versus introverts, more frequently shared their dreams with others. Intuitive people felt more positively toward dreams, which provided them with new ideas and help in life, compared to sensing people.

In an analysis of analytic German and Japanese psychotherapists' clients' dreams, the researcher found that patients' dreams reflected their psychological problems but became less aversive as therapy progressed (Roesler, 2018, 2020). Five themes were identified in the dreams: the dream ego was not present (like watching a movie), threatened, confronted with a performance challenge, moving toward a clear or unclear destination, or trying to communicate with another person.

Another dream interpretation analysis using a Jungian framework analyzed over 600 dreams of people facing extreme physical and emotional threats, namely Israelis and Palestinians during and after the Gaza Wars (Kron, 2020). The most frequent themes reflected the shadow archetype as well as features of personal issues, concrete versus symbolic, togetherness, active ego, and fear and anxiety. Analyzing dreams by age groups, they found that adolescents were most unconsciously vulnerable to the stress of the war, with more concrete dreams. Young adults' dreams indicated great unconscious coping with the dream theme of active ego emerging most often. Older adults' unconscious minds were least affected by the war, with primary dream themes symbolic or focused on personal issues. Taken together, all of this research provides some support for Jung's theory that dreams reflect challenges dreamers have or will face and may balance the unconscious with the conscious mind.

Pause for Reflection

Do your dreams feature common or uncommon themes? Do your dreams reflect current challenges or opportunities?

Reflections on Jung's Theory

Contributions

Jung's complex and unusual approach to the human personality has had considerable impact on a broad range of disciplines even beyond psychology, notably psychotherapy, psychiatry, sociology, economics, political science, philosophy, and religion. Recognized by the intellectual community at large, Jung received honorary degrees from Harvard and Oxford and has been acknowledged as a powerful influence on the work of many scholars.

Jung made several important and lasting contributions to psychology (see, for example, Summerville, 2010). The word-association test became a standard projective technique and inspired the development of the Rorschach inkblot test and the so-called lie-detection techniques. The concepts of psychological complexes and of introverted versus extraverted personalities are widely accepted in psychology today. A great deal of research is being conducted on the introversion–extraversion personality dimension, as we will see in Chapter 8.

In the following chapters, we will also see evidence of Jung's influence on the work of some other theorists. Jung's notion of individuation, or self-actualization, anticipated the work of Abraham Maslow. Jung was the first to emphasize the role of the future in determining behavior, an idea adopted by Alfred Adler. Maslow, Erik Erikson, and Raymond Cattell embraced Jung's suggestion that middle age is a time of crucial personality change. The idea of a midlife crisis is now seen by many as a necessary stage of personality development and has been supported by considerable research.

Criticisms

Despite the significance of these formulations, the bulk of Jung's theory was not received enthusiastically by psychologists. One reason concerns the difficulty of understanding Jungian concepts. Sigmund Freud, Alfred Adler, and others wrote in a clear style that allows their books to be easily read and understood. Jung did not write for the general public. Reading his work can be frustrating because his books contain many inconsistencies and contradictions.

Jung once said, "I can formulate my thoughts only as they break out of me. It is like a geyser. Those who come after me will have to put them in order" (quoted in Jaffé, 1971, p. 8). One Jungian scholar described one of Jung's major books as only partly intelligible. "The connection between one thought and the next is not clear and . . . there are many internal contradictions" (Noll, 1994, p. 109). This

criticism can be applied to many of Jung's writings. They are difficult to comprehend and lack internal consistency and systematization.

Jung's embrace of the occult and the supernatural is probably the source of most of the criticism directed at his theory. Evidence from mythology and religion is not in favor in an era when reason and science are considered the most legitimate approaches to knowledge and understanding. Critics charge that Jung accepted as scientific evidence the mythical and mystical occurrences his patients reported.

There is a notable lack of modern empirical research that is able to operationalize—use measurements that assess constructs or concepts—relevant variables to test some aspects of Jung's theory. One key to scientific validation is the ability to falsify (use empirical evidence to find support against) hypotheses, and that is difficult to do with Jungian psychology given how abstract many of the constructs are, such as personal unconscious, collective unconscious, and some of the archetypes. More, other theories of personality seem to be more helpful in doing empirical research to understand variation in humans, such that fewer people rely on the analytic psychological framework to do research. Most of the work uses the Myers-Briggs to assess personality types, which itself is problematic because the MBTI fails to capture stable traits.

Despite these problems, a surge of interest in Jung's work began in the late 1980s and continues today and many aspects of Jung's theory have received considerable research support, including introversion-extraversion as a trait, middle age as an important phase in life, individuation, and insights from analysis of dreams. He also had the early insight that men and women should not be constrained to behave only in stereotypically masculine and feminine ways, respectively, and that a self-actualized person will express a balance of traits. Formal training in Jungian analysis is available in New York, Chicago, Boston, San Francisco, Los Angeles, and several other major cities in the United States and Canada. There are also Jungian training institutes in South America, Europe, and Israel. The Society of Analytical Psychology, founded in 1947, publishes the Jungian *Journal of Analytical Psychology.*

Pause for Reflection

Are there other aspects of Jung's theory that conflict with your experiences or knowledge of psychological science?

DEI Spotlight

Jung's Theory and Diversity, Equity, and Inclusion

Jung's theory focuses on how the collective and the individual unconscious contribute to our psyche, especially through archetypes, including our shadows, and complexes. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individual, Family, and Society. Here we focus on Dr. Fanny Brewster, a Jungian analyst who has a PhD and MFA, and her arguments about how Jungian concepts can help us understand the experience of African Americans, individuals and families, in US society. As a Jungian analyst, Dr. Brewster inspires others to develop a deeper understanding of themselves in order to flourish in life. As an individual, Jungian theory and therapy have given her the tools by which to become her best self and help others do the same. She writes, "Today, as our understanding of Jungian psychology has grown, we also have a greater understanding of the shadow as an archetype functioning within us on an individual level as well as a collective level. I believe that our racial complex hides behind shadow, surrounds it, and in the case of racial prejudice gives it expression." (Brewster, 2019, p. 167). Black children in America have a dark history of unjust treatment of African Americans, starting with slavery, as well as modern prejudice to contend with. This makes its way into their unconscious through their own proximal experiences, their family members' manifestations of trauma, and through the world and media around them, Brewster suggests. As a result, they develop a complex based on their race. Dr. Brewster explains that Jung wrote about this early on:

> I was drawn to Jung's very limited mention of what I have termed racial complexes through his comment in Volume 10 of *The Collected Works* (par. 963), in which he said

DEI Spotlight, continued

Jung's Theory and Diversity, Equity, and Inclusion

> the following: "Just as the Colored man lives in your cities and even within your houses, so also he lives under your skin, subconsciously. Naturally it works both ways. Just as every Jew has a Christ complex, so every Negro has a white complex and every American (white) a Negro complex" (1970, p. 508). (p. 168)

Dr. Brewster grew up in a time of racial segregation and the civil rights movement to seek justice, equality, and equity for people of all skin colors. The vestiges of a society with slavery and of her own family's trauma manifested through situations in which her mother's shadow would come forth. She shares about an experience in South Carolina, where her grandmother lived and where members of the KKK were terrorizing Black people in the late 1950s and 1960s. Her mother became very angry with her (paternal) grandmother for sending her outside to pick cotton, both a danger and a symbol of the life her mother did not want for her.

> My mother's fury was fire because she had a different vision for me—it included getting an education . . . These were sacred words to a woman whose own mother had died at age 12 and who had to become dependent on family for every meal that she consumed . . . My paternal grandmother's actions were in direct contradiction to what my mother dreamt for me. I have only seen my mother enraged four times in my life. This was one of those times. My mother was like a possessed person. I know now that an archetypal energy of rage possessed her. (p. 169)

In this way, Brewster was strongly influenced by her own family's complexes and shadows. In modern times, Black children are exposed to a high level of violence against Black people "not only on television but in their families and in their neighborhoods" (p. 170). This combined with "institutional racism and the history of slavery has prevented our cultural group from fully experiencing psychological healing" (p. 170), she says. As Jung taught and Dr. Brewster underscores, the uncomfortable work of acknowledging the historical trauma and modern racism as contributors to racial complexes is essential to individual, family, and societal healing.

Chapter Summary

Parts of Jung's personality theory were influenced by his unhappy childhood experiences and his dreams and fantasies. Jung argued that personality is shaped by the future as well as the past, and he placed even greater emphasis on the unconscious than Freud did.

Jung broadened Freud's definition of libido, redefining it as a more generalized dynamic force. Jung used the term *libido* in two ways: as a diffuse, generalized life energy and as a narrower energy that fuels the psyche. The *psyche* is Jung's term for the personality. Psychic energy operates in accordance with the principles of opposites, equivalence, and entropy. The principle of opposites states that every aspect of the psyche has its opposite and that this opposition generates psychic energy. The principle of equivalence states that energy is never lost to the personality but is shifted from one part to another. The principle of entropy states that there is a tendency toward equilibrium in the personality.

The ego is the center of consciousness and is concerned with perceiving, thinking, feeling, and remembering. Part of our conscious perception is determined by the attitudes of introversion and extraversion, in which libido is channeled internally or externally.

The psychological functions include thinking, feeling, sensing, and intuiting. Thinking and feeling are rational functions; sensing and intuiting are nonrational. Only one attitude and one function can be dominant. The eight psychological types are formed by combinations of the attitudes and functions. A lot of research has been done with the Myers-Briggs Type Inventory (MBTI), which measures thinking, feeling, sensing, and intuiting, but this measure is neither strongly valid nor reliable.

The personal unconscious is a reservoir of material that was once conscious but has been forgotten or suppressed. Complexes, which may be conscious or unconscious, are patterns of emotions, memories, perceptions, and wishes centering on common themes. The collective unconscious is a storehouse of the

experiences of humankind transmitted to each individual. Archetypes are recurring themes that express these experiences and their expression contributes to our personality. The most powerful archetypes are the persona, anima, animus, shadow, and self.

Psychic birth occurs at puberty, when the psyche assumes a definite content. Preparatory activities mark the time from adolescence through young adulthood. In the period of middle age, when success has been achieved, the personality undergoes changes. Psychic energy must be rechanneled into the inner world of the unconscious, and the attitude must shift from extraversion to introversion.

Individuation (the realization of one's capabilities) does not occur until middle age, when people must confront their unconscious and abandon the behaviors and values that guided the first half of their lives to understand their true selves. Transcendence, a key part of individuation, involves the unification of the personality. Much research suggests that midlife crises are real and that some people get closer to individuation than others.

Jung's image of human nature was more optimistic and less deterministic than Freud's view. Jung believed that part of personality is innate and part is learned. The ultimate life goal is individuation. Childhood experiences are important, but personality is more affected by midlife experiences and hopes for the future. Personality is unique in the first half of life but not in the second—that is, people become more similar later in life as they get closer to the ideal of transcendence, when no one or few traits dominate over the others.

Jung's methods of assessment include the investigation of symbols, myths, and rituals in ancient cultures; the word-association test, used to uncover complexes; symptom analysis, in which patients free-associate to their symptoms; and dream analysis. Research applying Jung's word-association test and dream analysis continue today.

Jung's case study method, called life-history reconstruction, did not rely on objective observation, was not systematic and controlled, and was not amenable to replication and verification.

Research has supported some of Jung's ideas, but broader aspects of his theory have resisted attempts at scientific validation. His work has had considerable influence in several fields. Widely accepted Jungian ideas include the word-association test, complexes, introversion–extraversion, self-actualization, and the midlife crisis.

Review Questions

1. How would you describe the ways in which Jung's personality theory was influenced by his childhood experiences?
2. What are the principles of opposites, equivalence, and entropy? How do they relate to the concept of psychic energy?
3. Describe the three major points of difference between Jung's theory of analytical psychology and Freud's theory of psychoanalysis.
4. Compare and contrast the "attitudes" of introversion and extraversion.
5. Compare and contrast the "functions" of thinking, feeling, sensing, and intuiting. Consider whether they are rational or irrational.
6. How do the attitudes and the functions interact to produce eight personality types?
7. What are the strengths and weaknesses of the Myer-Briggs Type Inventory (MBTI)?
8. What are the relationships among the ego, personal unconscious, and collective unconscious?
9. What is a complex? How can a complex be helpful? How can a complex be hurtful?
10. Distinguish between the persona, shadow, and self archetypes.
11. What are the anima and animus archetypes? In Jung's view, are they supposed to be suppressed or expressed? Why?
12. Describe the development of personality according to Jung.
13. What is individuation? How must our archetypes change if we are to achieve individuation?
14. Discuss the methods of assessment Jung used.
15. Summarize the criticisms and the contributions of Jung's personality theory.

Suggested Readings

- Bair, D. (2003). *Jung: A biography.* Little, Brown. A thoroughly researched biography that assesses Jung's complex personality throughout the life span and shows its impact on his theories. It also notes the censorship the Jung heirs maintain over significant amounts of Jung's correspondence, suggesting that the definitive work has yet to be written.
- Bishop, P. (2014). *Carl Jung.* Reaktion Books. A concise biography of Jung that follows his life from childhood through his years with Freud and beyond,

portraying him as one of the most important European theorists of the 20th century.
- Brewster, F. (2019). *The racial complex: A Jungian perspective on culture and race*. Routledge.
- Crellin, C. (2014). *Jung's theory of personality: A modern reappraisal.* Routledge/Taylor & Francis Group. A thorough and scholarly critical analysis of Jung's approach to understanding personality, emphasizing its continuing relevance.
- Ellenberger, H. F. (1970). *The discovery of the unconscious: The history and evolution of dynamic psychiatry.* Basic Books. Traces the study of the unconscious from primitive times to Freudian psychoanalysis and its derivatives. See Chapter 9, "Carl Gustav Jung and Analytical Psychology."
- Hannah, B. (1976). *Jung: His life and work*. Putnam. A biographical memoir by a Jungian analyst who was a friend of Jung's for more than 30 years.
- Jung, C. G. (1961). *Memories, dreams, reflections*. Vintage Books. Jung's recollections of his life, written at the age of 81.
- Kerr, J. (1993). *A most dangerous method: The story of Jung, Freud, and Sabina Spielrein*. Knopf. The story of a woman patient who became involved in a long-standing relationship with her analyst, Carl Jung.
- McGuire, W. (Ed.). (1974). *Freud/Jung letters.* Princeton University Press. Contains some 360 letters, dating from 1906 to 1913, that describe the development and dissolution of the friendship between Sigmund Freud and Carl Jung.
- Roazen, P. (1975). *Freud and his followers.* Alfred A. Knopf. A lively, well-written account of Freud's life and of the men and women who became his disciples, some of whom later broke away to form their own schools of thought. See Part 6, "The 'Crown Prince': Carl Gustav Jung."
- Schultz, D. (1990). *Intimate friends, dangerous rivals: The turbulent relationship between Freud and Jung.* Jeremy Tarcher. Describes the personal and professional relationship between Freud and Jung and the parallels and differences in their childhood, midlife crises, and relationships with women.

Chapter 4

"The goal of the human soul is conquest, perfection, security, superiority. Every child is faced with so many obstacles in life that no child ever grows up without striving for some form of significance." —Alfred Adler

Alfred Adler: Individual Psychology

Learning Objectives

4.1 Differentiate Adler's theory of personality from Freud's theory of personality.

4.2 Identify the ways in which Adler's life shaped his theory of personality.

4.3 Compare and contrast childhood sources of inferiority feelings.

4.4 Describe inferiority feelings and their psychological results.

4.5 Describe the role of striving for superiority in personality.

4.6 Define the four styles of life.

4.7 Analyze the importance of social interest in people's lives.

4.8 Compare and contrast the results of different birth orders on personality.

4.9 List the methods used to assess people's personality in Adler's tradition.

4.10 Explain how Alder's theory has been applied to facilitate diversity, equity, and inclusion.

Alfred Adler proposed a theory of human nature that did not portray people as victims of instincts, biological forces, or childhood experiences. He called his approach **individual psychology** because it focused on the uniqueness of each person and denied the universality of biological motives and goals ascribed to us by Sigmund Freud. Adler also emphasized the importance of **holism**, that each person should be studied and appreciated for the whole of their personalities. This means persons are indivisible wholes and should not be broken into an id, ego, and superego, for example. The different parts of our personality work together toward our goals as a unified response to our unique experiences.

In Adler's view, each of us is primarily a social being. Our personalities are shaped by our unique social environments and interactions, not by attempts to satisfy biological needs. Unlike Freud, who saw sex as being of primary importance in shaping our personalities, Adler minimized the role of sex. To Adler, the conscious, not the unconscious, was at the core of personality. Rather than being driven by forces we cannot see and control, we are actively involved in creating our unique selves and directing our own futures.

With Adler and Freud, we see two vastly different theories created by two men, only 14 years apart in age, who were brought up in the same city in the same era and educated as physicians at the same university. As with Freud and Jung, certain aspects of Adler's childhood seemed to have influenced his way of looking at human nature.

The Life of Adler (1870–1937)

Childhood and Adolescence

Adler's early childhood was marked by illness, an awareness of death, and intense jealousy of his older brother. He lived with rickets (a vitamin D deficiency characterized by softening of the bones), which kept him from playing with other children. At age 3, his younger brother died in the bed next to his. At age 4, Adler himself almost died from pneumonia. When he heard the doctor tell his father, "Your boy is lost," he decided to become a doctor (Orgler, 1963, p. 16).

Adler was pampered by his mother initially, but then was suddenly dethroned at the age of 2 by the arrival of another baby. Biographers have suggested that Adler's mother may have then rejected him, but he was likely his father's favorite. Therefore, his childhood relations with his parents were quite different from Freud's, who was much closer to his mother than to his father. As an adult, Adler had no use for the Freudian concept of the Oedipus complex because it was so foreign to his childhood experiences.

Adler was always jealous of his older brother, who was vigorous and healthy and could engage in the physical activities and sports in which Alfred could not take part.

"I remember sitting on a bench, bandaged up on account of rickets, with my healthy elder brother sitting opposite me. He could run, jump, and move about quite effortlessly, while for me, movement of any sort was a strain and an effort" (Source: L Adler quoted in Bottome, 1939, pp. 30–31).

Adler felt inferior to his brother and to the other neighborhood children, who all seemed healthier and more athletic. As a result, he resolved to work hard to overcome his feelings of inferiority and to compensate for his physical limitations. Despite his small stature, clumsiness, and unattractiveness, the legacies of his illness, he forced himself to join in games and sports.

Gradually he achieved a sense of self-esteem and social acceptance. He also enjoyed and flourished in the company of other people and retained this sociability all his life. In his personality theory, Adler emphasized the importance of the peer group and suggested that childhood relationships with siblings and with children outside the family were much more significant than Freud believed.

In school (the same one Freud had attended), Adler was initially unhappy and only a mediocre student. Believing him to be unfit for anything else, a teacher advised Adler's father to apprentice him to a shoemaker, a prospect Adler found frightening. He was particularly bad in mathematics but persisted and eventually rose from being a student who was struggling to the top of his class through sheer hard work.

The story of Adler's childhood serves as an example of his theory of overcoming childhood weakness and inferiority to shape one's destiny. The theorist who would give the world the notion of inferiority feelings spoke from the depths of his own childhood. "Those who are familiar with my life work will clearly see the accord existing between the facts of my childhood and the views I expressed" (Source: L Adler quoted in Bottome, 1939, pp. 30–31).

Adulthood

Fulfilling his childhood ambition, Adler studied medicine at the University of Vienna but graduated with no better than an average academic record. He first went into private practice as an ophthalmologist (an eye doctor) but soon shifted to general medicine. He was interested in incurable diseases but became so distressed at his helplessness to prevent death, particularly in younger patients, that he decided to specialize in neurology and psychiatry instead.

Relations with Freud

Adler's nine-year association with Freud began in 1902, when Freud invited Adler and three others to meet once a week at Freud's home to discuss psychoanalysis. Although their relationship never became close,

individual psychology Adler's theory of personality that focuses on the uniqueness of each person.

holism The tenet of individual psychology that each person should be studied and appreciated for the whole of their personality.

Freud initially thought highly of Adler and praised his skill as a physician who was able to gain the trust of his patients.

It is important to remember that Adler was never a direct student or disciple of Freud and was not psychoanalyzed by him. But he did adopt psychoanalytic methods before developing his own. By 1910, although Adler was president of the Vienna Psychoanalytical Society and coeditor of its journal, he was also critical of Freudian theory and its emphasis on the unconscious. He soon severed all connection with psychoanalysis and went on to develop his own approach to personality.

A competitive hostility came to characterize Freud and Adler's relationship. Freud belittled Adler's physical stature (Adler was 5 inches shorter than Freud) and called him mean, jealous, and driven mad by ambition. He also described Adler's theory as worthless (Fiebert, 1997; Gay, 1988; Wittels, 1924).

Adler called Freud a swindler and denounced psychoanalysis as filth (Roazen, 1975). Adler became irate whenever he was introduced or referred to as a student of Freud. In his later years, Adler became just as embittered toward defectors from his own approach. Adler was known to flare suddenly into heated anger when he felt his authority challenged (Hoffman, 1994, p. 148).

Becoming a Celebrity in America

In 1912, Adler founded the Society for Individual Psychology. He served in the Austrian army during World War I (1914–1918) and later organized government-sponsored child counseling clinics in Vienna. In his clinics, Adler introduced group training and guidance procedures, forerunners of modern group therapy techniques. In 1926, he made the first of several visits to the United States, where he taught and gave extremely popular lecture tours.

He moved to New York City in 1929, around age 50, and continued to develop and promote his individual psychology. A biographer noted that Adler's personal traits of geniality, optimism, and warmth coupled with intense ambition catapulted him to American prominence as a psychological expert (Hoffman, 1994, p. 160). Adler's books and lectures brought him recognition on a national scale, and he became America's first popular psychologist, a celebrity of the day. In 1937, while on an exhausting 56-lecture tour of Europe, Adler experienced a heart attack and died in Scotland.

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Alfred Adler's practice of group therapy set the groundwork for modern group therapy.

Inferiority Feelings: The Source of All Human Striving

Adler believed that **inferiority feelings** are a constant motivating force in all behavior. "To be a human being means to feel oneself inferior," Adler wrote (1933/1939, p. 96). Because this condition is common to all of us, then, it is not a sign of weakness or abnormality.

Adler proposed that inferiority feelings are the source of all human striving. Individual growth results from **compensation**, which is our attempt to overcome our real or imagined inferiorities. Throughout our lives, we are driven by the need to overcome this sense of inferiority and to strive for increasingly higher levels of development.

The process begins in infancy. Infants are small and helpless and are totally dependent on adults. Adler believed that infants are aware of their parents' greater power and strength and of their own helplessness to resist or challenge that power. As a result, infants develop feelings of inferiority relative to the larger, stronger people around them.

Although this initial experience of inferiority applies to everyone in infancy, it is not genetically determined. Rather, it is a function of the environment, which is the same for all infants, a climate of helplessness and dependence on adults. Inferiority feelings have been defined empirically (by research) to include feelings of low self-esteem, high shame, and low self-efficacy (Lamberson & Wester, 2018). Although feelings of inferiority are an emotional burden, they are also important because they provide the motivation for us to strive and grow.

inferiority feelings In Adler's theory, feelings of being helpless and not good enough that drive striving.

compensation Individuals' attempts to overcome real or imagined inferiorities.

The Inferiority Complex

Suppose a child does not grow and develop in ways they expect as they get older. What happens when the child is unable to compensate for those feelings of inferiority? An inability to overcome inferiority feelings intensifies those feelings, leading to the development of an inferiority complex. People with an **inferiority complex** feel that they are not as capable or good as other people, and this results in feeling helpless and unable to cope with the demands of life. Adler found that many adults who came to him for treatment had developed an inferiority complex in childhood.

Research supports Adler's understanding of the effects of inferiority feelings later in life, when it comes to emotions, ways of thinking, behavior, and achievement. For example, a study of American college students showed that those with moderate inferiority feelings had higher grade point averages than those with low or high inferiority feelings (Strano & Petrocelli, 2005). This suggests that students who felt relatively superior (low inferiority) or relatively inferior (high inferiority) to others do not perform as well as others in college classes.

Research on teenagers and young adults in China showed that they felt inferior about different aspects of their lives at different ages. Younger teens experienced inferiority feelings about poor grades; older teens had inferiority feelings about physical attractiveness. College students reported inferiority feelings about their lack of social skills (Kosaka, 2008).

Feelings of inferiority can also shape people's emotions and relationships with other people. Individual styles of attachment sum up the way people relate to others in close relationships, including with romantic partners, friends, and family. Adler's work was ahead of its time in suggesting that people's social approaches were shaped by early relationships, and this is a central tenet of attachment theory. Research with university students who sought out counseling to help with their close relationships showed that people who had strong inferiority feelings tended to be insecurely attached (Akdogan et al., 2018). Specifically, the more feelings of inferiority men experienced, the more they were avoidantly attached, or the more emotionally distant and independent they tended to be in relationships. On the other hand, women with strong inferiority feelings were more anxiously attached in relationships: the more they invested emotionally in their social partners, the more afraid they were that they might lose those partners.

Causes of Inferiority Complexes

An inferiority complex can arise from three sources in childhood: organic inferiority, spoiling, and neglect.

Organic Inferiority Adler argued that weaknesses of the body shape personality through the person's efforts to compensate for that weakness, just as Adler compensated for rickets, the physical inferiority of his childhood years. A child who is physically weak, as Adler was, might focus on that weakness and work to develop superior athletic ability. A child who has difficulty reading might seek out help and work hard to develop strategies to read and seek out a career that includes a lot of reading.

History records many examples of that kind of compensation. In ancient times, the Greek statesman Demosthenes overcame a stutter to become a great orator. Theodore Roosevelt, 26th president of the United States, was ill as a child but became a model of physical fitness as an adult. Joe Biden, the 46th president of the United States, overcame a speech impediment (stutter) to become a world leader whose job it is to make a lot of speeches. Actors Keira Knightley and Tom Cruise were diagnosed with dyslexia, a learning disability characterized by difficulty processing phonemes and reading, yet they memorize and deliver lines from long scripts for a living. Winnie Harlow grew up facing the social challenges of having vitiligo, a condition in which skin pigmentation varies as it loses melanocytes (pigment cells), to become a famous fashion model. In the physical domain, Kyle Maynard, who was born without arms past the elbow and legs past the knee, has made a career out of athletic excellence, fighting in mixed-martial art (MMA) competitions and climbing Mount Kilimanjaro. As a final example, Stevie Wonder is a famous musician who happens to be blind, whose piano playing and singing inspired generations of R&B, blues, and jazz musicians.

Efforts to overcome organic inferiority can result in striking artistic, athletic, and social accomplishments, but if those efforts fail, they can lead to an inferiority complex.

Adler saw examples of people who had successfully compensated for physical weaknesses in his practice. His office in Vienna was located near an amusement park, and his patients included a number of circus performers and gymnasts. They possessed extraordinary physical skills that, in many cases, they developed as a result of hard work to overcome childhood challenges.

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inferiority complex An extension of feelings of inferiority that entail feeling less capable and good than others as a result of being overwhelmed by life's demands.

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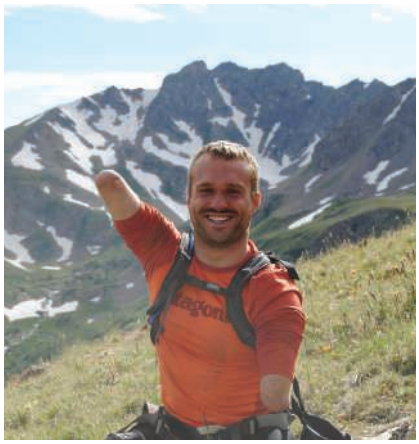
Historic Collection/Alamy Stock Photo

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People who have succeeded in domains related to unique challenges they faced in childhood, from left to right: Winnie Harlow, Kyle Maynard, and Keira Knightley.

There is limited empirical evidence for the idea that extreme challenges in childhood consistently lead to excellence in the same domain in adulthood. But there is ample evidence that children's experiences in the physical domain are carried with them throughout life and affect the way they feel. For example, research has found that college students who currently feel excluded and isolated had childhood experiences with sports and outdoor recreation in which they were excluded because of their weight or perceived lack of skill and felt discouraged (Flood et al., 2015). In contrast, the majority of students had rewarding and encouraging experiences. According to Adler's view, compensating for inferiority feelings and aiming to maintain positive feelings will likely guide these individuals' behaviors well into their futures.

Spoiling Spoiling or pampering a child can also bring about an inferiority complex, according to Adler. Spoiled children are the center of attention in the home. Their every need or whim is satisfied, and little is denied them. Spoiled children may therefore develop the idea that they are the most important people in any situation and that others should always defer to them.

The first experience at school, where these children are no longer the focus of attention, comes as a shock for which they are unprepared. Spoiled children have little social feeling and are impatient with others. They have never learned to wait for what they want, nor have they learned to overcome difficulties or adjust to others' needs. When confronted with obstacles to gratification, spoiled children come to believe that they must have some personal deficiency that is thwarting them; hence, an inferiority complex may develop.

Research supports Adler's idea that pampering in childhood could lead to a pampered style of life in which the person shows little or no social feelings for others (Capron, 2004). Research also goes further to suggest that pampering can lead to excessive narcissism, which involves a lack of responsibility or empathy for other people, as well as an exaggerated sense of self-importance and a tendency to exploit others (Capron, 2004). Different types of pampering are linked to different lifestyles. Overindulgence, which involves the persistent parental gratification of a child's needs and desires, can lead to feelings of entitlement as well as tyrannical and manipulative behavior. Overpermissiveness, which involves allowing children to behave as they please with no consideration for the effects of their behavior on other people, can lead to a disregard of social rules and the rights of others. Overdomination, which involves exclusive parental decision making, leads to a child's lack of self-confidence and a tendency to become dependent on others in adulthood. Overprotection, which involves parental caution, excessively warning children of potential dangers in their environment, can lead to generalized anxiety and a tendency to avoid or hide from social situations.

Neglecting It is easy to understand how neglected, unwanted, and rejected children can develop an inferiority complex. Their infancy and childhood are characterized by a lack of love and security because their parents are indifferent or hostile. As a result, these children may develop feelings of worthlessness or even anger, and they might view others with distrust. Indeed, today, neglect has come to be considered a major form of child abuse (Hickman, 2009).

There is much research that provides evidence to back up Adler's suggestion that children who were neglected or rejected by their parents develop feelings of worthlessness. A study of adults hospitalized for

Highlights

Research on Causes of Inferiority

Children who are neglected tend to develop

- Feelings of worthlessness and shame
- Depression
- Anxiety

Children who are pampered tend to

- Have low self-esteem
- Become narcissistic
- Lack empathy for others

depression found that the patients rated their parents as having been hostile, detached, and rejecting (Crook et al., 1981). Interviews with siblings, relatives, and friends of the patients confirmed that the parents had indeed behaved in hostile and neglectful ways.

In another study, parents of 8-year-old children completed a questionnaire to assess their child-rearing behaviors and their level of satisfaction with their children (Lefkowitz & Tesiny, 1984). Ten years later the children, then age 18, were given the depression scale of the Minnesota Multiphasic Personality Inventory (MMPI). Those who scored high in depression had been neglected in childhood by their parents. In contrast, those who scored lower on the depression scale had parents who were more attentive and loving.

More recent research has found that children who experienced neglect have also been found to experience more shame, depression, symptoms of post-traumatic stress disorder (PTSD), and lower socialization skills than children who were not neglected (Bennett et al., 2010; Lowell et al., 2011; Milot et al., 2013).

Children and adolescents in China (ages 5–17) who experienced neglect were far more likely to develop high anxiety than those who were not neglected (Guan et al., 2010). Neglected children may also be more prone to acts of violence and excessive alcohol use later in life (Widom et al., 2013). It does appear, then, that children who are neglected in childhood may pay a high price for it as they grow up.

The Superiority Complex

Whatever the source of the complex, a person may attempt to overcompensate and develop what Adler called a **superiority complex**. This involves an exaggerated opinion of one's abilities and accomplishments.

People with superiority complexes may feel inwardly self-satisfied and superior and show no need to demonstrate their superiority with actual accomplishments. Or the person may feel such a need and work hard to become extremely successful. In both cases, persons with a superiority complex are given to boasting, vanity, self-centeredness, and a tendency to denigrate others. There is evidence for this in research showing that men who experience feelings of superiority are more emotionally detached from other people (avoidantly attached; Akdogan et al., 2018).

Pause for Reflection

How have your experiences shaped feelings of inferiority and superiority?

Striving for Superiority or Perfection

Inferiority feelings are the source of motivation and striving, but to what end? Are we motivated simply to be rid of inferiority feelings? Adler believed that we work for something more; however, his view of our ultimate goal in life changed over the years.

At first, he identified inferiority with a general feeling of weakness or of femininity, in recognition of the inferior standing of women in the society of his day (that is, the societal suppression of women's rights). He spoke of trying to compensate for this feeling as the masculine protest. The goal of the compensation was a will or a drive toward power in which aggression, a supposedly masculine characteristic, played a large part. Later he rejected the flawed idea of equating inferiority feelings with femininity and developed a broader viewpoint in which we strive for superiority or perfection.

Adler described his notion of **striving for superiority** as the fundamental fact of life (Adler, 1930). Superiority is the ultimate goal toward which we strive. He did not mean superiority in the usual sense of the word, nor did the concept relate to the superiority complex. As it applies to all people, striving for superiority is not an attempt to be better than everyone else, nor is it an arrogant or

superiority complex One potential response to feelings of inferiority that entails an overcompensating unrealistically positive perception of one's own abilities and accomplishments.

striving for superiority The universal tendency for individuals to seek to be their best selves.

domineering tendency or an inflated opinion of our abilities and accomplishments. (Though, as discussed previously, some people may develop a superiority complex when they overcompensate for strong feelings of inferiority.)

What Adler meant was a drive for perfection. The word *perfection* is derived from a Latin word meaning to complete or to finish. Thus, Adler suggested that we strive for superiority in an effort to perfect ourselves, to make ourselves complete or whole. Modern theorists who carry on Adler's work explain that we feel anxious because we are concerned about finding belonging with others, being defeated, and especially protecting our feelings of superiority (Jokinen & Hartshorne, 2022)—such feelings may drive our striving for perfection.

This innate goal, the drive toward wholeness or completion, is oriented toward the future. Whereas Freud proposed that human behavior is *determined* by the past (that is, by the instincts and by our childhood experiences), Adler understood human motivation in terms of expectations and aspirations for the future. He argued that instincts and primal impulses were insufficient as explanatory principles. Only the ultimate, final goal of superiority or perfection could explain personality and behavior. What form that goal takes depends on how we consciously (versus unconsciously) and creatively (versus deterministically) respond to our childhood experiences.

Fictional Finalism

Adler applied the term *finalism* to the idea that we have an ultimate goal, a final state of being, and a need to move toward it. The goals for which we strive, however, are potentialities, not actualities. Adler believed that our goals are fictional or imagined ideals that cannot be tested against reality. Adler's life goal was to conquer the threat of death, which he faced at the age of 4 in the form of pneumonia. His way of striving for that goal, which of course is fictional because ultimately it cannot be won, was to become a physician (Hoffman, 1994).

These beliefs influence the ways we perceive and interact with other people. For example, if someone believes that behaving a certain way will bring rewards in a heaven or an afterlife, they may try to act according to that belief. Belief in the existence of an afterlife may not be based on objective reality, but it is real to the person who holds that view.

Adler formalized this concept as **fictional finalism**, the notion that fictional ideas guide our behavior as we strive toward a complete or whole state of being. We direct the course of our lives by many such fictions, but the most pervasive one is the ideal of perfection. He suggested that the best formulation of this ideal developed by human beings so far is the concept of God. Adler preferred the terms *subjective final goal* or *guiding self-ideal* to describe this concept, but it continues to be known as fictional finalism (Watts & Holden, 1994).

There are two additional points Adler made about striving for superiority. First, it increases rather than reduces tension. Unlike Freud, Adler did not believe that our sole motivation was to reduce tension. Striving for perfection requires great expenditures of energy and effort, a condition quite different from equilibrium or a tension-free state.

Second, the striving for superiority is manifested both by the individual and by society as a whole. Most of us are social beings. We strive for superiority or perfection not only as individuals but also as members of a group. We try to achieve the perfection of our culture. In Adler's view, individuals and society are interrelated and interdependent. People must function constructively with others for the good of all. In this way, Adler's fictional finalism describes the way people are empowered to shape their lives, even amid injustice. For example, research with Black American women demonstrated that these women "created fictional goals of superior academic achievement and mental strength or resilience as ways to counter such feelings and to prove their worth" in spite of negative depictions of Black women in society (Lemberger-Truelove, 2018, p. 89). Thus, to Adler, human beings perpetually strive for the fictional, ideal goal of perfection. How in our daily lives do we try to attain this goal? Adler answered this question with his concept of the style of life.

Pause for Reflection

What do you think your final fiction (life goal) is?

The Style of Life

Adler believed that the ultimate goal for each of us is superiority or perfection, but we try to attain that goal in many different ways. Each of us expresses the striving differently. We develop a unique pattern of

fictional finalism Subjective beliefs that are unfounded in fact and guide our behavior as we strive toward a complete or whole state of being.

characteristics, behaviors, and habits—or personality—which Adler called a distinctive character, or **style of life**. Everything we do is shaped and defined by our unique style of life. It determines which aspects of our environment we attend to or ignore and what attitudes we hold.

The style of life is shaped by childhood feelings of inferiority and resulting compensation, is learned from social interactions, and is so firmly crystallized by the age of 4 or 5 that it is difficult to change thereafter. These social interactions depend on the person's order of birth within the family and the nature of the parent–child relationship. Recall that one condition that can lead to an inferiority complex is neglect. Children who experienced neglect may feel inferior in coping with the demands of life and therefore become distrustful of and hostile toward others. As a result, their lifestyle may involve seeking revenge, resenting others' success, and taking whatever they feel is their due. In contrast, when people experience a supportive but not spoiled childhood, they may experience feelings of worth and optimism, which predict life satisfaction as Adler would expect (Wilson & Dowda, 2017).

You may have spotted an apparent inconsistency between Adler's notion of style of life and our earlier observation that his theory is less deterministic than Freud's. Adler said we are in control of our fate, not victims of it. But now we find that the style of life is determined by social relationships in the early years and subject to little change after that. However, Adler's theory is not as deterministic as it may seem at first. He resolved this seeming dilemma by proposing a concept he called the **creative power of the self**.

Adler believed that with free will we create ourselves, our personality, and our character; these are all terms Adler used interchangeably with style of life. We are not passively shaped by childhood experiences. Those experiences themselves are not as important as our conscious attitude toward them. Adler argued that neither heredity nor environment provides a complete explanation for personality development. Instead, the way we perceive and interpret these influences forms the basis for the creative construction of our attitude toward life.

Four Basic Styles of Life

Adler described several **universal problems** and grouped them into three categories: problems involving our behavior toward others, problems of occupation, and problems of love. Further, he proposed four basic styles of life for dealing with these problems: the dominant type, the getting type, the avoiding type, and the socially useful type.

The **dominant type** displays a dominant or ruling attitude with little social awareness. Such a person behaves without any regard for other people. The more extreme examples of this type attack others and may act sadistically, break the law, or have sociopathic qualities. They may experience alcohol or substance abuse problems or may die by suicide; they believe they hurt others by attacking themselves. The **getting type** (to Adler, the most common human type) expects to receive satisfaction from other people and so becomes dependent on them. The **avoiding type** makes no attempt to face life's problems. By avoiding difficulties, the person avoids any possibility of failure.

These three types are not prepared to cope with the problems of everyday life. They are unable to cooperate with other people, and the clash between their style of life and the real world results in abnormal behavior, which is manifested in neuroses (psychological disorders featuring negative affect, such as anxiety) and psychoses (impairments in perceiving reality). They lack what Adler came to call social interest.

The **socially useful type**, in contrast, cooperates with others and acts in accordance with their needs. Such persons cope with problems within a well-developed framework of social interest. Indeed, research shows that people who are oriented toward working with others (have social interest) are cautious, and have resources to cope well with traumatic events, showing posttraumatic growth (Leeman et al., 2015).

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style of life Personality and social patterns that reflect individuals' unique approaches to striving for superiority.

creative power of the self Individuals' ability to shape their own styles of life.

universal problems Challenges all people face in life, having to do with social interactions, occupation, and love.

dominant type Personality and style of life characterized by selfish and antisocial thoughts, feelings, and behaviors.

getting type Personality and style of life characterized by passive and dependent thoughts, feelings, and behaviors.

avoiding type Personality and style of life characterized by avoidant thoughts, feelings, and behaviors.

socially useful type Personality and style of life characterized by considerate, cooperative, and careful thoughts, feelings, and behaviors.

The basic styles of life dictate thoughts, feelings, and behavior across time and situations, especially when it comes to our well-being and how we relate to other people. One measure of important aspects of style of life is the Adlerian Personality Priority Assessment (APPA), which provides an understanding of how much people prioritize comfort/avoidance, superiority, pleasing, and control (Taylor & Mullen, 2019). In a study of Spanish adults that used the APPA, researchers find that people who prioritize control in their personalities have better well-being than those who prioritize superiority, pleasing, and comfort/avoidance (Oberst & Checa, 2022). But the healthiest combination may be high control, high pleasing, and low comfort, which were associated with feelings of belongingness and satisfaction. The Basic Adlerian Scales for Interpersonal Success (BASIS-A) is another useful measure and has 65 items designed to assess lifestyle as well as degree of social interest. The five personality dimensions measured are social interest, going along, taking charge, wanting recognition, and being cautious (Peluso et al., 2004).

Theorists of Adler's view have expanded on how styles of life can help clinicians understand and treat anxiety disorders (Jokinen & Hartshorne, 2022). The anxiety experienced by dominant and getting types may grow out of desire and striving for superiority and popularity, which leads to perfectionistic patterns. The anxiety of avoidant types may grow out of concerns about making mistakes, and they may feel discouraged and low confidence as a result. The socially useful type may experience quality relationships as buffers against anxious feelings, but they may also experience anxiety when their need to belong is thwarted. Research with the APPA demonstrates that people who prioritize comfort are stressed, worried, and not very satisfied with their lives (Taylor & Mullen, 2019). In contrast, people who prioritize superiority over others are stressed and worried but are also more satisfied with their lives. The pattern is somewhat similar for people who prioritize pleasing others, but they are no more or less satisfied with their lives. Finally, people who prioritize having control experience a mix: They are less stressed, no more or less worried, and are more satisfied in life.

One example of how styles of life affect interpersonal interactions is in the context of bullying. Psychology theorists propose that the dominant type is associated with bullying behavior; avoiding types are more likely to be unconcerned or guilty bystanders; and socially useful types are more likely to be defenders of bullying victims (Seon et al., 2021).

Style of life and social interest may be expressed in daily thoughts, feelings, and behaviors, from choosing what to wear, where to study, and how we talk to others, but also in long-term creative commitments, including tattoos. Research has shown that people's reasons for getting tattoos and narratives around their tattoos have a lot to do with social interest across life's tasks, including love, work, friendship, the self, and spirituality (McCarty & Popejoy, 2021).

Pause for Reflection

Which style of life do you think you lead with?

Social Interest

Adler believed that getting along with others is the first task we encounter in life. Our level of ability to get along with other people becomes part of our style of life and therefore influences how well or poorly we will deal with all of life's problems. He described this as the concept of **social interest**, which is the individual's potential to cooperate with other people in order to achieve personal and societal goals. Adler's term for this concept in the original German, *Gemeinschaftsgefuhl*, is best translated as "community feeling" (Stepansky, 1983, p. xiii). However, social interest has become the accepted term in English.

Early in his career, Adler's suggested that people were driven by a lust for power and a need to dominate. He proposed this idea when he was struggling to establish his own point of view within the Freudian circle. After he broke with Freud and achieved recognition for his own work, he changed his stance and said that people are motivated more by social interest than by the needs for power and dominance.

Although we are influenced more strongly by social than biological forces, in Adler's view, the potential for social interest is innate. In that limited sense, then, Adler's approach has a biological element. However, the extent to which our innate potential for social interest is developed depends on our early social experiences.

No one can entirely avoid other people or obligations toward them. From earliest times, people have congregated in families, tribes, and nations. Communities are indispensable to human beings for protection and

social interest Each individual's innate potential to cooperate with other people in order to achieve personal and societal goals.

survival. Thus, it has always been necessary for people to cooperate with others to express their social interest. The individual must cooperate with and contribute to society to realize personal and communal goals. Adler believed that people have a fundamental need to belong in order to be healthy, well-functioning individuals (Ferguson, 2010).

Research on Social Interest

Psychologists have developed multiple measures of Adler's concepts of social interest and style of life and have studied social interest across the world, given the importance to all humans to find belonging. The Social Interest Scale (SIS) consists of pairs of adjectives (Crandall, 1981). Subjects choose the word in each pair that best describes an attribute they would like to possess. Words such as *helpful*, *sympathetic*, and *considerate* are thought to indicate one's degree of social interest. Research using the SIS found that those high in social interest reported less stress, depression, anxiety, and hostility than those low in social interest. People with high social interest scored higher on cooperation with others, empathy, responsibility, and popularity (Crandall, 1984; Watkins, 1994; Watkins & St. John, 1994). Research with college students found that those high in social interest scored high in spirituality and religiosity. However, their spirituality was of a positive, tolerant, and helping nature, not necessarily religious ethnocentrism or fundamentalism (Leak, 2006a).

The Social Interest Index (SII) is a self-report inventory in which subjects judge the degree to which statements represent themselves or their personal characteristics (Greever et al., 1973). The items, such as "I don't mind helping out friends," were selected to reflect Adler's ideas and to indicate a person's ability to accept and cooperate with others.

People who score high on the SII, indicating a high degree of social interest, tend to be high in friendliness, empathy, cooperation with others, tolerance, and independence. They have also been found to be lower in anxiety, hostility, depression, and neuroticism (Leak 2006a, 2006b). Other work with the SII showed that women who scored high in social interest were significantly higher in self-actualization, a characteristic of the healthy personality described by Maslow (refer to Chapter 9). Other research found that social interest was higher in women than in men and that it increased with age for both genders (Greever et al., 1973). This finding was conceptually replicated in a sample of Iranian children (Alizadeh et al., 2017). This may be because women tend to be socialized to be cooperative, empathetic, and other-oriented from a young age.

Other studies in the United States and China found that those high in social interest were also high in subjective well-being, hope and optimism, agreeableness, self-identity, self-determination, and a strong sense of purpose in life (Barlow et al., 2009; Foley et al., 2008; Leak & Leak, 2006). A study of high school adolescents in grades 9 to 12 found that those high in social interest scored significantly higher in overall life satisfaction, as well as satisfaction with friends and family, than did those who scored low in social interest (Gilman, 2001). Similar patterns occur in adults as well, as research finds that people with higher social interest have lower attachment anxiety and avoidance and higher relationship satisfaction (Rennebohm et al., 2017).

Social interest may also serve as a buffer against repeated antisocial behavior. For example, research conducted with men incarcerated for criminal offenses ranging in age from 18 to 40 showed that those who scored high in social interest were far less likely to be charged with additional crimes following their release from jail than were those who scored low in social interest (Daugherty et al., 2001). Children and adolescents classified as juvenile delinquents scored lower on social interest than did those who were not identified as delinquents (Newbauer & Stone, 2010).

A study of Latino/a men and women living in the United States found that those who were well-adjusted to both cultures scored higher on social interest measures than those primarily acculturated to only the Latino/a or the U.S. culture (Miranda et al., 1998). Research within the Chinese collectivist cultural context used the Sulliman Scale of Social Interest and showed that individuals' own tendencies toward collectivism versus individualism did not shape their social interest (Huo & Johnson-Migalski, 2021). Considering these findings together, social interest may facilitate participation in the diversity of cultural contexts in which people find themselves.

High social interest may also be good for your health. Social interest, with its related feelings of belonging, cooperation, and a sense of contributing to or receiving support from a social network, has been positively associated with physical and mental well-being. For example, people who scored high in social interest tended to have stronger immune systems, fewer colds, lower blood pressure, and greater subjective well-being (Nikelly, 2005). Work done with

Highlights

Research on Style of Life and Social Interest

People who score high in social interest tend to

- Score low on depression, anxiety, and hostility
- Develop feelings of empathy for others
- Become happy and agreeable

the Social Interest Scale for Iranian Children (SISIC) showed that children with ADHD had lower social interest relative to children without ADHD (Alizadeh et al., 2016).

Pause for Reflection

How has social interest played a role in your life?

The Role of the Mother in Developing Social Interest

Adler noted the importance of the mother as the first person with whom a baby comes in contact. Through the mother's behavior toward the child, the mother can either foster social interest or thwart its development. Adler believed that the mother's role was vital in developing the child's social interest as well as all other aspects of the personality. He wrote:

> This connection [between mother and child] is so intimate and far reaching that we are never able in later years to point to any characteristic as the effect of heredity. Every tendency which might be inherited has been adapted, trained, educated and made over again by the mother. Her skill or lack of skill will influence all the child's potentiality (Adler quoted in Grey, 1998, p. 71).

According to Adler, the mother must teach the child cooperation, companionship, and courage. Only if children feel a kinship with others will they be able to act with courage in attempting to cope with life's demands. Children (and later, adults) who approach others with suspicion and hostility will approach life with the same attitude. Those who have no feeling of social interest may become neurotic or antisocial. Adler believed that a host of "evils" ranging from war to racial hatred to public drunkenness stemmed from a lack of community feeling.

Birth Order

One of Adler's most enduring contributions is the idea that order of birth is a major social influence in childhood, one from which we create our style of life. Even though siblings are likely to have the same parents and live in the same house, they do not have identical social environments. Being older or younger than one's siblings and being exposed to differing parental attitudes creates different childhood conditions that help determine different kinds of personalities.

Adler liked to amaze lecture audiences and dinner guests by correctly guessing people's order of birth on the basis of their behavior. He wrote about four situations: the first-born child, the second-born child, the youngest child, and the only child. Think about your own order of birth within your family and assess how you think it compares with Adler's perspective.

The First-Born Child

First-born children are in a unique and enviable situation, at least for a while. The parents are usually very happy at the birth of their first child and devote a great deal of time and attention to the new baby. First-borns typically receive their parents' instant and undivided attention. As a result, first-borns often have a very happy and secure existence until the second-born child appears.

Dethronement Suddenly no longer the focus of attention and no longer receiving constant and undivided love and care, first-borns are, in a sense, dethroned. The affection and attention first-borns received during their reign will now have to be shared with the new baby. They must often submit to the outrage of waiting until after the newborn's needs have been met, and they are admonished to be quiet so as not to disturb the new baby.

No one could expect first-borns to suffer this kind of drastic displacement without putting up a fight. They will try to recapture their former position of power and privilege. The first-born's battle to regain supremacy in the family is lost from the beginning, however. Things will never be the same, no matter how hard the first-born tries.

For a time, first-borns may become stubborn, ill-behaved, and destructive and may refuse to eat or go to bed. They are striking out in anger, but the parents may strike back, and their weapons are far more powerful. When first-borns are punished for their troublesome behavior, they may see that as more proof of their fall

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One's order of birth within the family, being older or younger than one's siblings, creates different conditions of childhood that can affect personality.

and may come to hate the second child, who is, after all, the cause of the problem.

Adler believed all first-borns feel the shock of their changed status in the family, but those who have been excessively pampered feel a greater loss. Also, the extent of the loss depends on the first-born's age at the time the "rival" appears. In general, the older a first-born child is when the second child arrives, the less dethronement the first-born will experience. For example, an 8-year-old will be less upset by the birth of a sibling than will a 2-year-old.

Adler found that first-borns are often oriented toward the past, locked in nostalgia, and pessimistic about the future. Having once learned the advantages of power, they remain concerned with it throughout life. They can exercise power over younger siblings, but at the same time they may be more subject to the power of their parents because more is expected of them.

There are advantages to being the first-born child, however. As the children age, the first-born often has to play the role of teacher, tutor, leader, and disciplinarian, expected by parents to help care for younger siblings. These experiences often enable the first-born to mature intellectually to a higher degree than the younger children. As one psychologist put it:

> Second-born children might ask older siblings about the meanings of words, about how some things work and why, about the whereabouts of candy or of a parent who is late in coming back home, and about countless other matters that older siblings must now explain. In this role of tutor, first-born children gain an intellectual advantage. By virtue of rehearsal, by virtue of having to articulate an explanation or offer the meaning of a word, first-borns gain more verbal fluency more quickly than the second-borns (Zajonc, 2001, p. 491).

Adler believed that first-borns also take an unusual interest in maintaining order and authority. They become good organizers, conscientious and scrupulous about detail, authoritarian and conservative in attitude. Sigmund Freud was a first-born; Adler described him as a typical eldest son. First-borns may also grow up to feel insecure and hostile toward others. Adler believed that people who were highly neurotic or antisocial were often first-borns.

A great deal of research has been conducted on the effects of one's order of birth within the family (Eckstein & Kaufman, 2012). According to Adler, first-borns are concerned with power and authority. One way for them to gain power and authority as adults is through achievement in their work. In many areas, from college attendance to high-level management, first-borns are overrepresented relative to their proportion of the population. Studies in France, Croatia, Canada, and England showed that first-borns tend to be more closely supervised in childhood, rated by their mothers as less fearful, and higher on measures of dominance in college (Beck et al., 2006; Begue & Roche, 2005; Kerestes, 2006; McCann et al., 1990). More first-borns than later-borns become eminent, and they tend to attain greater intellectual achievement in academic settings and greater power and prestige in their careers (Breland, 1974; Schachter, 1963). In one review of 200 birth-order studies, the authors concluded that first-borns had higher success and achievement levels and were more likely to do prestigious jobs: accountants, lawyers, architects, surgeons, college professors, or astronauts (Eckstein et al., 2010).

Studies in the United States and in Poland found that first-borns scored higher on measures of intelligence, completed more years of formal education, and worked in more prestigious occupations than later-borns (Herrera et al., 2003). Research on adults in Sweden showed that first-borns scored higher than later-borns on tests of managerial or executive functioning (Holmgren et al., 2006). This is not to say that birth order is destiny. Critically thinking about these findings, it could be that parents tend to invest more in the education of their first-borns, which results in higher educational and occupational attainment. That parents may give their first-borns more supervisory attention could also help explain these findings.

Similarly, evidence suggests that first-borns may be more intelligent than later-borns, but not all researchers agree (see Rodgers, 2001). The IQ scores of 400,000 European men were analyzed with respect to birth order (Belmont & Marolla, 1973). The results showed that first-borns had higher IQ scores than second-borns, second-borns had higher scores than third-borns, and so on.

A study of more than 240,000 men recruited in the army in Norway showed that older siblings scored higher on IQ tests than younger siblings (Kristensen & Bjerkedal, 2007).

These findings were confirmed for men and women in several nations (Zajonc et al., 1979). A possible explanation relates not to genetic differences but to the first-born's exclusive exposure to adults. Consequently, first-borns may have a more stimulating intellectual environment than later-borns. Although first-borns may be more intelligent than later-borns, they do not always earn higher grades in school. Studies of U.S. high school students confirm that first-borns have higher IQ scores, but later-borns tend to work harder and achieve higher grade point averages (Frank et al., 2010; Rettner, 2010).

Research in Britain has found that first-borns are far less likely to suffer from PTSD than those who are the fifth child or younger in large families (Green & Griffiths, 2014). Other research found that first-borns report lower depression and anxiety and higher self-esteem than later-borns (Gates et al., 1988). First-borns may also be more extraverted and conscientious (Sulloway, 1995). However, later research in the Netherlands found the opposite: Later-borns were more extraverted in that they were more dominant and assertive (Pollet et al., 2010). It is not unusual to find different patterns of personality in different cultural contexts.

First-borns tend to be more responsive to authority. Thus, first-borns rely more on the standards of others to guide their behavior and form the basis of their self-concept (Newman et al., 1992). First-born girls were found to be more obedient and socially responsible than later-borns and to feel closer to their parents (Sutton-Smith & Rosenberg, 1970).

Characteristics of the first-born can even shape parents' decisions to have additional children: Parents whose first child showed high intelligence, few behavior problems, and the ability to adapt to new situations were more likely to have additional children within the first five years of the first child's life (Jokela, 2010).

The Second-Born Child

Second-born children, the ones who caused so much upheaval in the lives of first-borns, are also in a unique situation. They never experience the powerful position once occupied by the first-borns. Even if another child is brought into the family, second-borns do not suffer the sense of dethronement felt by the first-borns.

Also, by this time the parents have usually changed their child-rearing attitudes and practices. A second baby is not the novelty the first was; parents may be less concerned and anxious about their own behavior and may take a more relaxed approach to the second child.

From the beginning, second-borns have a pacesetter in the older sibling. The second child always has the example of the older child's behavior as a model, a threat, or a source of competition. Adler was a second-born child who had a lifelong competitive relationship with his older brother (whose name was Sigmund). Even when Adler became a famous analyst, he still felt overshadowed by his brother.

> Alfred [Adler] always felt eclipsed by his model brother and resented his favored status in the family. Even in middle age, he would feel moved to comment wearily that wealthy businessman Sigmund, a good industrious fellow [who] was always ahead of me is still ahead of me! (Hoffman, 1994, p. 11).

Competition with the first-born may serve to motivate the second-born, who may try to catch up to and surpass the older sibling, a goal that spurs language and motor development in the second-born. Not having experienced power, second-borns are not as concerned with it. They are more optimistic about the future and are likely to be competitive and ambitious, as Adler was.

Other less beneficial outcomes may also arise from the relationship between first-borns and second-borns. If, for example, the older siblings excel in sports or scholarship, the second-borns may feel that they can never surpass the first-borns and may give up trying. In this case, competitiveness would not become part of the second-borns' lifestyles, and they may become underachievers, performing below their abilities in many facets of life.

Less research has been conducted on second-born children. A study of first-born and second-born siblings, conducted over three years, found that the attitudes, personalities, and leisure activities of second-born children were influenced more by their older siblings than by their parents (McHale et al., 2001). Research on

major league baseball players found that those who were younger brothers were 10 times more likely than older brothers to attempt the high-risk action of stealing bases during a game. They also had higher batting averages than those who were older brothers (Sulloway & Zweigenhaft, 2010). Other research has shown that later-borns were more likely to become firefighters, high school teachers, musicians, photographers, social workers, or stuntmen than pursue high-prestige occupations (Eckstein et al., 2010).

The Youngest Child

Youngest or last-born children never face the shock of dethronement by another child and often become the focus of doting and affection by the family, particularly if the siblings are more than a few years older. Driven by the need to surpass older siblings, youngest children often develop at a remarkably fast rate. Last-borns are often high achievers in whatever work they undertake as adults.

The opposite can occur, however, if the youngest children are excessively pampered and come to believe they needn't learn to do anything for themselves. As they grow older, such children may retain the helplessness and dependency of childhood. Unaccustomed to striving and struggling, used to being cared for, these people find it difficult to adjust to adulthood.

Highlights

Research on Birth Order

First-borns tend to be:

- Intelligent
- Successful in college and career
- Low in depression and anxiety
- High in self-esteem

Second-borns tend to be:

- Influenced by older siblings
- More likely to take risks
- Engaged in creative careers

Last-borns (the youngest child) tends to be:

- High in social interest and agreeableness
- Rebellious

Only-borns tend to be:

- High in achievement and intelligence
- Industrious and perform well in school
- High in self-esteem

Adler predicted that last-born children, if excessively pampered, would have adjustment problems as adults. Binge drinking in college has been found to be significantly higher among last-borns than first-borns (Laird & Shelton, 2006), and this may be linked to poor coping strategies. Other research suggests that last-borns may feel a greater degree of academic rivalry with their siblings than first-borns do (Badger & Reddy, 2009). In the study of PTSD mentioned previously, the later-borns were found to be more subject to stress and adjustment disorders (Green & Griffiths, 2014). It may be that last-borns are less prepared to cope with life's challenges because either they received less maturity-encouraging attention and investment from their parents or they received more spoiling than earlier-borns.

The Only Child

Only children never lose the position of primacy and power they hold in the family. They remain the focus and center of attention. Spending more time in the company of adults than a child with siblings, only children often mature early and manifest adult behaviors and attitudes.

Only children may experience problems when they find that in areas of life outside the home, such as school, they are not the center of attention. Only children have learned neither to share nor to compete. If their abilities do not bring them sufficient recognition and attention, they are likely to feel keenly disappointed.

To Adler, only-born adults are overly concerned with being the center of attention, as they were in childhood, and they may be more selfish. In support of this idea is early research that found that only-borns to be more self-centered than were children reared with siblings (Jiao et al., 1986). However, research has not consistently supported this notion. One study found that only children were more cooperative than first-borns or last-borns (Falbo, 1978). Another study found that that instead of seeking out attention via extroversion, only-children were more likely to be introverted compared to people of other birth orders (Cotterill, 2022).

Being the center of parents' attention may inspire and enable only-borns to reach high levels of achievement and well-being. An analysis of 115 studies of only-borns reported that they have higher levels of achievement and intelligence, but comparable social and emotional adjustment, relative to people who have siblings (Falbo & Polit, 1986).

Other research (Mellor, 1990) confirmed those results and reported that only-children had greater initiative, aspiration, industriousness, and self-esteem. In addition, they have been found to be strongly motivated toward achievement and to score high in confidence and organizational skills (Siribaddana, 2013). Only-borns may also have more educational opportunities and parental resources, enabling them to perform better than children with siblings. Indeed, an analysis of several studies shows that the number of siblings in a family is a consistent predictor of educational success; people with fewer siblings perform better in school (Downey, 2001).

Birth order can also affect our choice of friends and partners and their choices of us. First-borns are more likely to associate with other first-borns, second-borns with other second-borns, and so on. Only children tend to associate with other only children. These preferences held for friendships as well as for romantic relationships (Hartshorne, 2010; Hartshorne et al., 2009). In research that studied different-gender marriage patterns, women were less likely to marry only-born men and more likely to marry middle- and oldest-born men (Manning, 2020). In contrast, men were more likely to marry only-born women and less likely to marry middle- and oldest-born women.

Birth-Order Effects: A Matter of Belief?

With his ideas about order of birth, Adler was not proposing firm rules of childhood development. A child will not automatically acquire a particular kind of character based solely on their position in the family. What Adler was suggesting was the likelihood that certain styles of life will develop as a function of order of birth combined with one's early social interactions. The creative self in constructing the style of life uses both influences.

And now, after you have read about those studies showing the differences among people related to their order of birth, we come to one other piece of research. Those who believe in the effects of birth order were found to be different from those who do not believe that order of birth affects people in different ways. Believers in birth-order effects, one study suggests, score significantly lower in being open to new experiences and significantly higher in neuroticism than those who do not believe in differential effects of their order of birth (Gundersen et al., 2011).

Pause for Reflection

Does Adler's theory of birth order align with your perceptions of self, family, and friends?

Assessment in Adler's Theory

Like Freud, Adler developed his theory by analyzing his patients, that is, by evaluating their verbalizations and behavior during therapy sessions. Adler's approach was more relaxed and informal than Freud's. Whereas Freud's patients lay on a couch while he sat behind them, Adler and his patients sat in comfortable chairs facing each other. The sessions were more like chats between friends than the more formal relationships maintained by Freud.

Adler also liked to use humor in his therapy, sometimes teasing his patients in a lighthearted, friendly way. He had a storehouse of jokes appropriate for various neuroses and believed that making a joke would sometimes lead a patient to see how ridiculous their negative feelings were. When an adolescent patient told Adler he felt guilty when he masturbated, Adler replied: "You mean to say you masturbate and feel guilty? That is too much. One would be enough: either masturbate or feel guilty. But both is too much" (Hoffman, 1994, pp. 209, 273).

Adler assessed the personalities of his patients by observing everything about them: the way they walked and sat, their manner of shaking hands, even their choice of which chair to sit in. He suggested that the way we use our bodies indicates something of our style of life. Even the position in which we sleep is revealing.

For example, according to Adler, restless sleepers and those who sleep flat on their back want to seem more important than they are. Sleeping on one's stomach displays a stubborn and negative personality. Curling in the fetal position shows that the person is fearful of interacting with others. Sleeping with the arms outstretched reveals a need to be nurtured and supported. There is not a lot of evidence for these ideas.

Adler's primary methods of assessment, which he referred to as the entrance gates to mental life, are order of birth, early recollections, and dream analysis. In addition, psychologists have developed psychological assessment tests based on Adler's concept of social interest, as you read previously. Adler's purpose in assessing personality was to discover the patient's style of life and to determine whether it was the most appropriate one for that person.

Early Recollections

According to Adler, and confirmed by modern research, our personality emerges during the first four or five years of life. Our **early recollections**, our memories from that period, indicate the style of life that continues to characterize us as adults. Adler found that it made little difference whether his clients' early recollections were of real events or were fantasies.

In either case, the primary interest of the person's life revolved around the remembered incidents and so, in Adler's view, early recollections are the most telling single indicators of lifestyle (Manaster & Mays, 2004, p. 114). Adler also found that many early memories contained references to actual physical objects as part of the memory they were drawing forth (Clark, 2009).

Although Adler believed that each early memory should be interpreted within the context of the patient's style of life, he found commonalities among them. He suggested that memories involving danger or punishment indicated a tendency toward hostility. Those concerning the birth of a sibling showed a continued sense of dethronement. Memories that focused on one parent showed a preference for that parent. Recollections of improper behavior warned against any attempt to repeat the behavior.

Adler believed that:

> People remember from early childhood (a) only images that confirm and support their current views of themselves in the world and (b) only those memories that support their direction of striving for significance and security. [His] focus on selective memory and lifestyle emphasize what is remembered. In contrast, Freud's approach to interpreting early memories emphasizes what is forgotten through the mechanism of repression (Kopp & Eckstein, 2004, p. 165).

Much research supports Adler's contention that early recollections shape and give insight on people's adult styles of life. In general, people's early recollections largely focus on social interest as shown through themes of empathy, cooperation, and also independence (Frank & Shoshana, 2019). But there is also specificity, with early recollections revealing unique insights for different styles of life. Early memories of people with anxiety were concerned with fear; early memories of persons with depression centered on abandonment; and early memories of those with psychosomatic complaints involved illness (Jackson & Sechrest, 1962).

Early memories of people with alcohol use disorders contained threatening events, as well as situations in which they were controlled by external circumstances rather than by their own decisions. The early memories of a control group of non-alcoholics showed neither of these themes (Hafner et al., 1982).

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Our earliest memories of childhood help reveal our lifestyle.

A study of police officers in the United States found that those who had traumatic early recollections experienced more pronounced symptoms of PTSD than those who did not have those kinds of early memories (Patterson, 2014). Similarly, in a study with graduate students using the Early Recollection Rating Scale, people who experienced anxiety in high-stress situations recall their environments as more threatening (Johnson-Migalski et al., 2019).

Early recollections of adults convicted of crimes dealt with disturbing or aggressive interactions with other people. They contained more unpleasant events than the early recollections of a control group (Hankoff, 1987). The early memories of adolescents classified as delinquents involved breaking rules, having difficulty forming social relationships, and being unable to cope with life on their own. They also perceived their parents as less trustworthy and as more likely to hurt than to help. These themes were not present in the early memories of a control group (Davidow & Bruhn, 1990).

Recollections of psychiatric patients considered dangerous to themselves and to others showed more aggressive early memories than did recollections of nondangerous psychiatric patients. The recollections of the dangerous patients revealed that they felt vulnerable and powerless and saw others as hostile and abusive (Tobey & Bruhn, 1992).

Adler's Strange Early Memory

An early memory Adler recalled as an adult was from when he was five years old and had just started school. He remembered being terribly afraid

early recollections Memories from early childhood that represent contributors to people's styles of life.

every day because the path to school led through a cemetery (Adler, 1924/1963). He was frightened every time he walked to school but was also confused because other children seemed not to notice the cemetery.

Since he was the only one who was afraid, this heightened his sense of inferiority. One day he decided to put an end to his fears. He ran through the cemetery a dozen times until he felt he had overcome his feelings. From then on, he was able to go to school without being afraid.

Thirty years later, Adler met a former schoolmate and asked him if the old cemetery was still there. The man expressed surprise and told Adler there had never been a cemetery near their school. Adler was shocked; his recollection had been so vivid! He sought out other classmates and questioned them.

They all told him the same thing: There had been no cemetery. Adler finally accepted that his memory of the incident was faulty. Nonetheless, it symbolized the fear and inferiority, and his efforts to overcome them, which characterized his style of life. That early recollection had revealed an important and influential aspect of his personality.

The Nature of Early Recollections

Research using objective scoring systems for early recollections has shown that these memories tend to be subjective recreations rather than events that actually occurred, much like Adler's memory of the cemetery (Statton & Wilborn, 1991).

One study reported that when people were asked to make up early recollections that might have happened to someone else, the themes were similar to those revealed by their own recollections (Buchanan et al., 1991). This study also provided research support for Adler's contention that early recollections reveal one's current style of life and therefore can be used as a therapeutic device. Table 4.1 summarizes possible themes of early recollections.

Early recollections studied in adults in the United States and in Israel have been shown to predict career preferences. For example, the early memories of physicists, mathematicians, and psychologists included themes such as curiosity, independent thought, and skepticism about information from authority figures (Clark, 2005; Kasler & Nevo, 2005). In summary, although early recollections may be as much subjectively constructed as objectively remembered, they help us understand people's personalities, as Adler suggested.

Dream Analysis

Adler agreed with Freud about the value of dreams in understanding personality but disagreed on the way in which dreams should be interpreted. Adler did not believe that dreams fulfill wishes or reveal hidden conflicts. Rather, dreams involve our feelings about a current problem and what we intend to do about it.

One of Adler's own dreams illustrates this point. Before his first visit to the United States, Adler felt anxious and worried, concerned about how he and his theory of personality would be received. The night before he was scheduled to cross the Atlantic Ocean by ship, he dreamed that the ship, with him aboard, capsized and sank.

> All of Adler's worldly possessions were on it and were destroyed by the raging waves. Hurled into the ocean, Adler was forced to swim for his life. Alone he thrashed and struggled through the choppy waters. But through the force of will and determination, he finally reached land in safety (Hoffman, 1994, p. 151).

Table 4.1 Early recollections and style of life themes

Recollection	Possible Theme
First school memory	Attitudes toward achievement, mastery, and independence
First punishment memory	Attitude toward authority figures
First sibling memory	Evidence of sibling rivalry
First family memory	Functioning in social situations
Clearest memory of mother	Attitudes toward women
Clearest memory of father	Attitudes toward men
Memory of person you admire	Basis for role models
Happiest memory	Basis for how your strongest needs are best gratified

Source: Adapted from Bruhn, A. R. (1992a, 1992b). The early memories procedure. *Journal of Personality Assessment, 58*(1), 1–15, 326–346.

Table 4.2 Dream events and their latent meanings

Dream Event	Adlerian Interpretation
Being paralyzed	Facing insoluble problems
School exams	Being unprepared for situations
Wearing the wrong clothes	Being disturbed by one's faults
Sexual themes	Retreating from sex or inadequate information about sex
Rage	An angry or hostile style of life
Death	Unresolved issues about the dead person

Source: Adapted from Grey, 1998, p. 93.

This dream revealed Adler's fear about what he would face in the United States and his intention to land safely, in other words, to achieve success for himself and for his theory of individual psychology.

In the fantasies of our dreams (both night dreams and daydreams), we believe we can surmount the most difficult obstacle or simplify the most complex problem. Thus, dreams are oriented toward the present and future, not toward conflicts from the past.

Adler believed that dreams should never be interpreted without knowledge of the person and their situation. The dream is a manifestation of a person's style of life and so is unique to the individual. Adler did find common interpretations for some dreams, however. Many people reported dreams involving falling or flying. Freud interpreted such dreams in sexual terms.

According to Adler, a dream of falling indicates that the person's emotional view involves a demotion or loss, such as the fear of losing self-esteem or prestige. A flying dream indicates a sense of striving upward, an ambitious style of life in which the person desires to be above or better than others.

Dreams that combine flying and falling involve a fear of being too ambitious and thus failing. A dream of being chased suggests a feeling of weakness in relation to other people. Dreaming one is naked indicates a fear of giving oneself away. Additional Adlerian dream interpretations are shown in Table 4.2.

Adler's belief that dreams help us solve current problems was investigated by exposing subjects to situations in which the failure to solve a puzzle was considered a threat to the personality. They were then allowed to sleep. Some were permitted to dream but were awakened only during non-rapid-eye-movement (NREM) sleep. Others were awakened during rapid-eye-movement (REM) sleep so that they could not dream.

Those who dreamed later recalled significantly more of the uncompleted puzzle than those who did not dream. The researchers concluded that dreaming enabled the subjects to deal effectively with the current threatening situation, that is, the failure to solve the puzzle (Grieser et al., 1972).

In another study, the dreams of two groups were reported (Breger et al., 1971). One group consisted of college students who were anticipating a stressful psychotherapy session. The other group consisted of patients about to undergo major surgery. Both groups recalled dreams that focused on their conscious worries, fears, and hopes. They dreamed about the current problems they were facing.

Pause for Reflection

Do you have early memories or recurring dreams that feel very meaningful?

Reflections on Adler's Theory

Adler's system provides a hopeful, flattering image of human nature that is the antithesis of Freud's dreary, pessimistic, and unconscious-focused view. Certainly, it is more satisfying to our sense of self-worth to consider ourselves capable of consciously shaping our own individual development and destiny rather than being dominated by instinctual forces and childhood experiences over which we have no control.

Rather than being driven by unconscious forces, we possess the free will to shape the social forces that influence us and to use them creatively to construct a unique style of life. Freud's system, in contrast, offered a depressing universality and sameness in human nature.

Although Adler argued that some aspects of human nature are innate—for example, the potential for social

interest and striving for perfection—it is experience that determines how these inherited tendencies will be realized. Childhood influences are important, particularly order of birth and interactions with our parents, but we are not victims of our childhood experiences. Instead, we use them to create our style of life.

Adler saw each person as striving to achieve perfection, and he viewed humanity in similar terms. He believed in the creative power of the individual and was optimistic about social progress.

Contributions

Adler's influence within psychology has been substantial. In later chapters we will see examples of his ideas in the work of other personality theorists. Those contributions make Adler's personality theory one of the most enduring. He was ahead of his time, and his cognitive and social emphases are more compatible with trends in psychology today than with the psychology of his own day (LaFountain, 2009). Abraham Maslow wrote over 30 years after Adler's death that "Alfred Adler becomes more and more correct year by year. As the facts come in, they give stronger and stronger support to his image of man" (1970a, p. 13).

Adler's emphasis on social forces in personality will be discussed in the next chapter in the theory of Karen Horney. His focus on the whole person and the unity of personality is reflected in the work of Gordon Allport. The creative power of people to shape their own styles of life, and the insistence that future goals are more important than past events, influenced the work of Abraham Maslow. A social-learning theorist, Julian Rotter, wrote that he continues to be impressed by Adler's insights into human nature (Rotter, 1982, pp. 1–2).

Adler's ideas also reached into Freudian psychoanalysis. It was Adler who proposed the aggressive drive more than 12 years before Freud included aggression as a primary motivating force in addition to sex. The neo-Freudian ego psychologists, who focus more on conscious and rational processes and less on the unconscious, follow Adler's lead rather than Freud's.

Adler disputed Freud's views on women, arguing that there was no biological basis, such as penis envy, for women's alleged sense of inferiority. Such a notion, Adler charged, was a myth invented by men to maintain their alleged sense of superiority. He acknowledged that women may feel inferior but believed that was due to social conditioning and sex-role stereotyping. He also believed in the idea of equality for the sexes and supported the women's emancipation movements of the day.

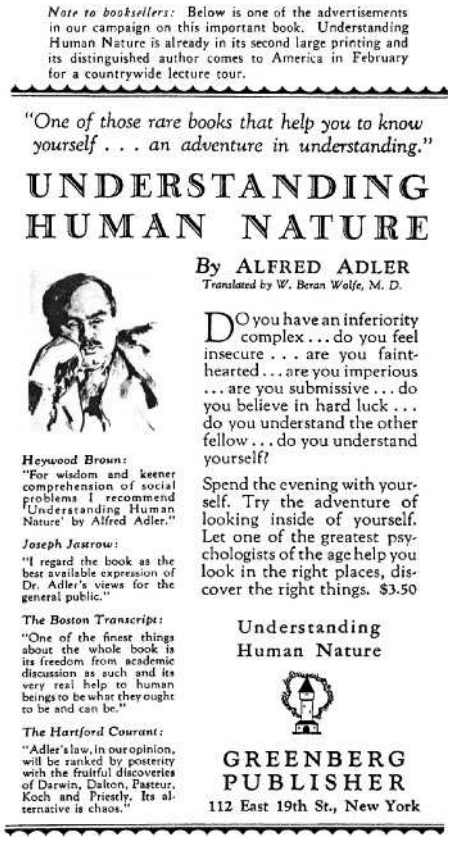
Specific Adlerian concepts of lasting importance to psychology include the early work on organic inferiority, which has influenced the study of psychosomatic disorders; the inferiority complex; compensation; and order of birth. Adler is also considered a forerunner of social psychology and group therapy (refer to Figure 4.1).

Criticisms

As influential as Adler's work has been, however, it does have its critics. Freud charged that Adler's psychology was oversimplified and would appeal to

Figure 4.1

Adler's books achieved considerable popularity in the United States and spawned the huge genre of self-help books.



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Edward Hoffman, The Drive for Self: Alfred Adler and the Founding of Individual Psychology, Addison-Wesley, 1994.

Source: Hoffman, E. (1994). *The drive for self: Alfred Adler and the founding of individual psychology.* Addison-Wesley.

many people because it eliminated the complicated nature of the unconscious, had no difficult concepts, and ignored the problems of sex. Freud remarked that it could take two years or more to learn about his psychoanalysis, but Adler's ideas and technique can be easily learned in two weeks, because with Adler there is so little to know (quoted in Sterba, 1982, p. 156).

It is true that Adler's theory seems simpler than Freud's or Jung's, but that was Adler's deliberate intention. He wrote that it had taken him 40 years to make his psychology simple. One point that reinforces the charge of oversimplification is that his books are easy to read because he wrote for the general public and because some of them were compiled from his popular lectures.

A related charge is that Adler's concepts appear to rely heavily on commonsense observations from everyday life. A book reviewer in the *New York Times* noted: "Although [Adler] is one of the most eminent psychologists in the world, when he writes about psychology there is no other who can equal him in simplicity and non-technicality of language" (quoted in Hoffman, 1994, p. 276).

Critics allege that Adler was inconsistent and unsystematic in his thinking and that his theory contains gaps and unanswered questions. Are inferiority feelings the only problem we face in life? Do all people strive primarily for perfection? Can we become reconciled to a degree of inferiority and no longer try to compensate for it? These and other questions cannot all be answered adequately by Adler's system, but as we have seen, most theorists leave us with unanswered questions. Relatedly, many of Adler's contentions included opposite predictions that make it difficult to falsify the hypotheses via research.

Some psychologists dispute Adler's position on the issue of determinism versus free will. Early in his career, Adler did not oppose the notion of determinism. It was broadly accepted in science at the time, and it characterized Freud's psychoanalytic theory. Later, Adler felt the need to grant more autonomy to the self, and his final formulation rejected determinism.

His concept of the creative self proposes that before the age of 5, we fashion a style of life using material provided by our heredity and our environment. However, it is not clear how a child is able to make such momentous decisions. We know that Adler favored free will and opposed the idea that we are victims of innate forces and childhood events. That position is clear, but the specifics of forming the style of life are not.

Another criticism has to do with a lack of scientific rigor. Adler's primary research method was the case study. Unfortunately, little of Adler's data survived. He did not publish case histories except for two fragments: one written by a patient, the other written by a patient's physician. Adler did not know the patients involved, but he analyzed their personalities by examining their writings.

Adler's data and research method are subject to the same criticisms we discussed for Freud and Jung. His observations cannot be repeated or replicated nor were they conducted in a controlled and systematic fashion. Adler did not attempt to verify the accuracy of his patients' reports or explain the procedures he used to analyze the data, and he had no interest in applying the experimental method. A follower wrote: Adler wanted his psychology to be a science, but it has not been a psychology easily verified by the scientific method (Manaster, 2006, p. 6).

Although most of Adler's propositions have resisted attempts at scientific validation, many aspects of Adler's theories have been the subject of research, as we review in each section previously.

Later Recognition and Influence

Although his ideas have been widely accepted, Adler's public recognition declined after his death in 1937, and he has received relatively little subsequent praise or credit for his contributions. Many concepts have been borrowed from his theory without acknowledgment. A typical instance of this lack of recognition can be found in Sigmund Freud's obituary in the *Times* newspaper of London, which named Freud as the originator of the term *inferiority complex*. When Carl Jung died, the *New York Times* said he had coined the term. Neither newspaper mentioned Adler, the originator of the concept. However, Adler did receive one unique honor: A British composer named a string quartet for him.

Adler's followers claim that individual psychology remains popular among psychologists, psychiatrists, social workers, and educators. *Individual Psychology: The Journal of Adlerian Theory, Research and Practice* is published quarterly by the North American Society of Adlerian Psychology. Other Adlerian journals are published in Germany, Italy, and France. Adlerian training institutes have been established in New York, Chicago, and other cities.

DEI Spotlight

Alder's Theory and Diversity, Equity, and Inclusion

Adler's individual psychology's focus on holism, social interest, and belonging means that it has special implications for individuals, families, and society when it comes to diversity, equity, and inclusion.

Individual. This section's Individual Spotlight is on Mitsuko Mizuno, a Japanese woman who has spent decades exploring Adler's theory. Mitsuko experienced a personal renaissance through her later studies of Adler's research (Mizuno, 2022). Although she had long been interested in Adler's theory, Mitsuko felt frustrated with her studies in Japan, sharing "I got so disappointed with myself that I even thought I should better quit learning it" (Mizuno, 2022, p. 104). Like many people, Mitsuko dealt with an inferiority complex, feeling she was not good enough and then blaming herself for being judgmental, "I was blaming myself and hated myself for being judgmental but didn't know how to stop myself" (p. 106). Individual psychology and its scholars brought Mitsuko the opportunity to explore her style of life and use her creative power of the self to decide how she would think, feel, and behave through a supportive community. She was reminded that "that *Gemeinschaftsgefühl* was an innate potentiality"—she held with her the potential for social interest and could build on that to find belonging (p. 104).

Adlerian therapists, scholars, and friends helped her understand her personality through two early recollections (ERs). In one, she remembers being scolded by her father for trying to use scissors for the first time at age 4, with him saying, "What a *horrible* child you are!" (p. 108). She felt frightened, shocked, and angry and took from this that she would be punished for being curious. In another memory, she recalls being overwhelmed and feeling a little lonely when viewing the beauty of an orange sunset over a beach on a family vacation. Mitsuko realized the first ER represented her fear of failure and the second represented her feeling inadequate to be a part of something beautiful. Her mentor in Adler's individual psychology, Marina Bluvshtein (who has conducted much of the research on the subjects in this chapter), helped Mitsuko realize "that I cannot dissect the parts I hate and throw them away to make a better version of me. I am me as a whole!" (p. 106), and people have within them wisdom to understand themselves. Mitsuko's striving is evident in her attaining a master's degree from Adler Graduate School (AGS) and becoming a leading counselor and teacher of Adlerian Individual Psychology in Japan.

Family. Here, we focus on how Adler's views can support a modern family, a couple deciding whether to have a biological child together—Michael and David (Brown et al., 2020). Michael is a 25-year-old hetero transgender man, and his partner, David, is a gay man. Michael wants to adopt a child, while David wants to have a biological child carried by Michael. The disagreement around family planning created tension, frustration, and anger. Their counselor brought together Adlerian and family systems theory to approach supporting David and Michal with LGBTQ affirmation and a social justice orientation. By focusing on Adler's ideas of holism, belongingness, and social interest within Michael and David's relationship but also in their families more widely, the counselor was able to support Michael and David "to navigate the individual meaning of their personal identity and gain insight into the relational dynamics of their family, feeling more prepared as they progress further on their family journey" (p. 136). In particular, insights that come from an analysis of their relationships with their parents helped David and Michael discover the ways their belonging had been stunted in childhood, and how they may employ their creative power to learn from those experiences and build and maintain strong belonging in their new family.

Society. In 1967, amid a civil rights reckoning in the society of the United States, Kenneth Clark wrote:

> To the extent that I have been able to make any contribution to the theoretical and moral assumptions upon which the struggle for racial justice in America has been based, it has been primarily through the appropriate modification and use of the Adlerian perspective and conceptual framework. To the extent that Adlerian theory influenced my own thinking and research, and to the extent that my thoughts and writings have influenced in any way the civil rights movement, determines, at least in part, the extent to which ideas of Alfred Adler have contributed to the accelerated quest for racial justice in America. (p. 182)

DEI Spotlight, continued

Alder's Theory and Diversity, Equity, and Inclusion

Kenneth Clark argued that feelings of inferiority drive hostility and intergroup aggression and violence, and that racism may be sustained in majority group members because of how children manifest their superiority complex and striving. White children may compare themselves to Black children, who are at a disadvantage, and feel superior rather than evaluating themselves based on ability and achievement. The psychological patterns necessary to maintain this sense of superiority include guilt and rationalizations. Because children of the majority group learn about the importance of justice and democracy, yet learn that some injustice and exclusion has been institutionalized, they may feel morally confused, conflicted, and cynical. Some may deal with this by evincing more racist hostility toward the disadvantaged group, whereas others may idealize authorities in those institutions.

Adler's ideas of holism, belongingness, and social interest provided Kenneth Clark with the framework to understand the feelings, thoughts, and behaviors of individuals across society during the fight for civil rights. In his own personal striving, Kenneth Clark was a socially useful type, bringing together his community. He, his wife, and community group founded the North Side Child Development Center in Harlem for children with emotion dysfunction and the Youth Opportunities Unlimited program to support economically disadvantaged young people and inspired President Lyndon Johnson's War on Poverty program. Kenneth Clark fought for desegregation in New York as the only Black member of the Board of Regents. His commitment to civil rights and justice across American society was acknowledged by being given the Spingarn Medal by the NAACP in 1961, and his contributions to psychology were acknowledged by his being chosen as the American Psychological Association's president and Gold Medal Award recipient. He inspired modern Alderians to action (Bluvshtein et al., 2021): "Dr. Clark's insights implore our field to recognize the responsibility to contribute to systemic change and the power in doing so. The crucial, and perhaps even undervalued, role in Black Americans' fight for social justice, equity, and equality in this nation lies at the feet of social science" (p. 270). Adler's views on individual psychology help us understand that a healthy and just society regards all members with respect as whole individuals and to view the whole of society, regardless of race, as deserving of belonging and as experiencing social interest.

William E. Sauro/New York Times Co./Getty Images

Kenneth B. Clark (1914–2005)

Chapter Summary

Adler's childhood was marked by intense efforts to compensate for his feelings of inferiority. His system of individual psychology differs from Freudian psychoanalysis in its focus on the uniqueness of the individual, on consciousness, and on social rather than biological forces. It also minimizes the role of sex.

Inferiority feelings are the source of all human striving, which results from our attempts to compensate for these feelings. Inferiority feelings are universal and are determined by the infant's helplessness and dependency on adults.

An inferiority complex (an inability to solve life's problems) results from being unable to compensate for inferiority feelings. An inferiority complex can originate in childhood through organic inferiority, spoiling, or neglect. A superiority complex (an exaggerated opinion of one's abilities and accomplishments) results from overcompensation.

Our ultimate goal is superiority or perfection; that is, making the personality whole or complete. Fictional finalism refers to fictional ideas, such as perfection, that guide our behavior. Style of life refers to unique patterns of characteristics and behaviors by which we strive for perfection. The creative power of the self refers to our ability to create ourselves from the materials provided by our heredity and environment. Four basic styles of life are the dominant or ruling type, the getting type, the avoiding type, and the socially useful type. Social interest is innate but the extent to which it is realized depends on early social experiences.

Order of birth is a major social influence in childhood from which one's style of life is created. First-borns are oriented toward the past, pessimistic about the future, and concerned with maintaining order and authority. Second-borns compete with first-borns and are apt to be ambitious. Last-borns, spurred by the need to surpass older siblings, may become high achievers. Only children may mature early but are apt to face a shock in school when they are no longer the center of attention.

Adler's theory of human nature is more hopeful than Freud's. In Adler's view, people are unique, and they possess free will and the ability to shape their own development. Although childhood experiences are important, we are not victims of them.

Adler's methods of assessment are order of birth, early recollections, and dream analysis. Research has provided support for Adler's views on the following: dreams, early memories, and childhood neglect and pampering; his belief that social interest is related to emotional well-being; the idea that birth order is associated with personality.

Adler's emphasis on cognitive and social factors in personality, the unity of personality, the creative power of the self, the importance of goals, and cognitive factors has influenced many personality theorists.

Review Questions

1. In what ways did Adler's theory of personality reflect his own experience (in childhood and adulthood)?
2. Compare and contrast Adler's theory of personality with Freud's.
3. How are inferiority feelings and the inferiority complex related? How does each develop? What are the effects of feelings of inferiority on an individual's personality?
4. How does the superiority complex differ from the idea of striving for superiority? How did Adler define superiority?
5. Describe the concept of fictional finalism, and explain how it relates to the notion of striving for superiority.
6. How, according to Adler, does the self develop? Do people play an active or a passive role in the development of the self?
7. What are the four basic styles of life according to Adler? How do they each relate to well-being?
8. What parental behaviors may foster a child's development of social interest? Which basic style of life is identified with social interest?
9. How do people with high social interest differ from those with low social interest?
10. Describe the personality characteristics proposed by Adler that may develop in first-born, second-born, and youngest children as a result of their order of birth within the family.
11. If it were possible to choose, which birth-order position would you select for yourself in your family? Why?
12. Summarize the research findings on the personalities of first-born and only-born children. Do the results support Adler's predictions?
13. How did Adler assess the personalities of his patients?
14. What is the importance of early recollections in personality assessment? Give an example of how one of Adler's recollections revealed an aspect of his personality.
15. What is the purpose of dreams? Does contemporary research on sleep and dreaming support Adler's views?
16. Discuss the contributions of Adler's system within psychology today.
17. Describe the implications of Adler's theory for diversity, equity, and inclusion.

Suggested Readings

- Adler, A. (1930). Individual psychology. In C. Murchison (Ed.), *Psychologies of 1930* (pp. 395–405). Clark University Press. A clear exposition of the basic principles of Adler's individual psychology.
- Ansbacher, H. L. (1990). Alfred Adler's influence on the three leading cofounders of humanistic psychology. *Journal of Humanistic Psychology,*

30(4), 45–53. Traces Adler's influence, in person and through his writings, on the development of humanistic psychology in the United States, most notably through his contact with Maslow and Rogers.

- Ansbacher, R. R. (1997). Alfred Adler, the man, seen by a student and friend. *Individual Psychology, 53*, 270–274. Using Adler's technique of early recollections, the author evaluates her memories of Adler's lectures and therapy sessions in New York and Vienna.
- Carlson, J., & Maniacci, M. P. (Eds). (2011). *Alfred Adler revisited*. Routledge/Taylor & Francis Group. A collection of readings by Adler's scholars detailing the basic elements of his work and linking many of his ideas to contemporary developments in psychology.
- Ellenberger, H. F. (1970). *The discovery of the unconscious: The history and evolution of dynamic psychiatry*. Basic Books. Traces the study of the unconscious from primitive times to Freudian psychoanalysis and its derivatives. See Chapter 8, "Alfred Adler and Individual Psychology."
- Fiebert, M. S. (1997). In and out of Freud's shadow: A chronology of Adler's relationship with Freud. *Individual Psychology, 53*, 241–269. Reviews the seven-year correspondence between Adler and Freud describing changes in their personal and professional relationships and their acrimonious breakup.
- Grey, L. (1998). *Alfred Adler, the forgotten prophet: A vision for the 21st century*. Praeger. A biography and an assessment of the continuing influence of Adler's ideas.
- Hoffman, E. (1994). *The drive for self: Alfred Adler and the founding of individual psychology*. Addison-Wesley. Discusses Adler's contributions to personality theory, psychoanalysis, and popular psychology. Recounts events in his life as the basis for familiar concepts such as inferiority complex, overcompensation, and style of life.
- Sulloway, F. J. (1996). *Born to rebel: Birth order, family dynamics, and creative lives*. Pantheon. Analyzes revolutions in social, scientific, and political thought dating back to the 16th century to demonstrate the influence of birth order on personality development. Suggests that birth-order effects transcend gender, social class, race, national origin, and time.

Chapter 5

The basic evil is invariably a lack of genuine warmth and affection. —Karen Horney

Karen Horney: Neurotic Needs and Trends

Learning Objectives

5.1 Compare and contrast Horney's theory with that of Freud, providing three examples of similarities and differences.

5.2 Summarize the role of hostility and repression in child–parent relationships and how they shape personality.

5.3 Describe the four basic types of behavior people use in childhood to try to protect themselves from basic anxiety.

5.4 List the three neurotic trends of personality types and the behaviors associated with each one.

5.5 Analyze the role of the idealized self-image in shaping personality.

5.6 Outline Horney's theorizing about women.

5.7 Summarize Horney's view of personality in five sentences.

Karen Danielsen Horney was another defector from the orthodox Freudian point of view. Although she was never a colleague of Freud's, as Jung and Adler had been, Horney was trained in the official psychoanalytic doctrine. She did not remain long in the Freudian camp, however. Her differences with Freud began when she took issue with his portrayal of women's psychology.

An early feminist, she argued that psychoanalysis focused more on men's development than on women's. To counter Freud's contention that women are driven by penis envy, she proposed that men are envious of women for their ability to give birth. "I know just as many men with womb envy as women with penis envy," she said (quoted in Cherry & Cherry, 1973, p. 75). Freud was not happy with that remark, nor were most men analysts.

Horney's theory was strongly influenced by her personal experiences in childhood and adolescence, as well as by social and cultural forces that were different from

those that had influenced Freud. Horney developed her theory in the United States, a culture radically different from Freud's Vienna. Also, by the 1930s and 1940s, major changes had occurred in popular attitudes about sex and the roles of men and women. These changes were occurring in Europe as well, but they were considerably more advanced in the United States. Although a focus on women's psychology was a huge step forward, sex and gender were still considered in a binary framework, as is the case for most historical psychology.

Horney found that her American patients were so unlike her earlier German patients, both in terms of their personalities and mental health challenges, that she believed only the social forces to which they had been exposed could account for such differences. She concluded that personality does not depend wholly on biological forces, as Freud proposed. If it did, she said, we would not see such major differences from one culture to another.

Horney, like Adler, placed a much greater emphasis than Freud on social relationships and interactions as significant factors in the formation of personality. She argued that sex is not the governing factor, as Freud claimed, and she questioned his concepts of the Oedipus complex, the libido, and the three-part structure of personality. To Horney, people are motivated not by sexual or aggressive forces but rather by the needs for security and love, which clearly reflected her life experiences.

The Life of Horney (1885–1952)

Family Challenges

Karen Danielsen grew up in a small village near Hamburg, Germany. She was the second-born child who, from an early age, envied her older brother, Berndt. He was attractive and charming, the adored first-born, but she was smarter and more vivacious. She confided to her diary, "It was always my pride that in school I was better than Berndt, that there were more amusing stories about me than about him" (Horney, 1980, p. 252). She also envied him because he was a boy, and girls were considered inferior and had less freedom. "I know that as a child I wanted for a long time to be a boy, that I envied Berndt because he could stand near a tree and pee" (Horney, 1980, p. 252).

An even stronger influence was her father. At the time of her birth, he was a 50-year-old ship's captain of Norwegian background. Her mother was 17 years younger and of vastly different temperament. Her father was religious, domineering, imperious, and morose; her mother was attractive, spirited, and free-thinking. Horney's father spent long periods away at sea, but when he was home, the opposing natures of the parents led to frequent arguments. Her mother made no secret of her wish to see her husband dead, and she told young Karen that she had married him not for love but from fear of becoming a spinster.

A Search for Love

We can see the roots of Horney's personality theory in these and other childhood experiences. For most of her youth she doubted that her parents wanted her and believed they loved Berndt more than they loved her. At 16, she wrote in her diary, "Why is everything beautiful on earth given to me, only not the highest thing, not love!" (Horney, 1980, p. 30). Although she desperately wanted her father's love and attention, he intimidated her with his fierce eyes and stern, demanding manner. She felt belittled and rejected when he often made disparaging comments about her intelligence and appearance.

Rebellion and Hostility

As a way of retaining her mother's affection, she acted the part of the adoring, obedient daughter. Until the age of 8, she was considered a model child at that time in history, clinging and compliant. Despite her efforts, however, she did not think she was getting sufficient love and security. Her self-sacrifice and good behavior were not working, so she changed tactics and deliberately became ambitious and rebellious, deciding that if she could not have love and security, she would take revenge for her feelings of unattractiveness and inadequacy. "If I couldn't be beautiful, I decided I would be smart" (Horney quoted in Rubins, 1978, p. 14).

As an adult she realized how much hostility she had developed as a child. Her personality theory describes how a lack of love in childhood fosters anxiety and hostility. A biographer concluded, "In all her psychoanalytic writings Karen Horney was struggling to make sense of herself and to obtain relief from her own difficulties" (Paris, 1994, p. xxii).

Still Searching for Love

At 14, she developed an adolescent crush on a teacher and filled her diary with emotional comments about him. She continued to have infatuations with her male teachers, in a confused and unhappy way common to adolescents (Seiffge-Krenke & Kirsch, 2002). At 17, she awakened to the reality of sex and soon met a man she described as her first real love, but the relationship lasted only two days. Another man came into her life, prompting 76 pages of soul-searching in her diary. Horney decided that being in love eliminated, at least temporarily, her anxiety and insecurity; it offered an escape (Sayers, 1991).

Although Horney's quest for love and security was often thwarted, her search for a career was straightforward and successful. She decided at age 12, after being treated kindly by a physician, that she would become a doctor. Despite the medical establishment's discrimination against women and her father's opposition, she worked in school to prepare herself for medical studies. In 1906, she entered the University of Freiburg medical school, only six years after the first woman had, reluctantly, been admitted.

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Karen Horney was one of few women in medical school. While at the University of Berlin, she met her husband, and later married him. Both are shown here, with two of their children in 1913.

Marriage and Career

During her years at medical school, Horney (then Danielsen) met two men; she fell in love with one and married the other. Oskar Horney, whom she married, was studying for a PhD in political science and after their marriage became a successful businessman. Karen Horney excelled in her medical studies and received her degree from the University of Berlin in 1913.

The early years of her marriage were a time of great personal distress. She gave birth to three daughters and felt overwhelmed by unhappiness and feelings of oppression. She complained of crying spells, stomach pains, chronic fatigue, compulsive behaviors, frigidity, and a longing for sleep, even death. The marriage ended after 17 years.

During and after her marriage, Horney had a number of love affairs. A biographer wrote:

> When she did not have a lover, or a relationship was breaking down, she felt lost, lonely, desperate, and sometimes suicidal. When she was involved in a morbidly dependent relationship, she hated herself for her inability to break free. She attributed her desperate need for a man to her unhappy childhood. (Paris, 1994, p. 140)

When she realized these attachments were not helping to alleviate her depression and other emotional problems, she decided to undergo psychoanalysis.

Horney's Psychoanalysis

The therapist Horney consulted, Karl Abraham (a Freudian loyalist), attributed her problems to her attraction to forceful men, which he told her was a residue of her childhood Oedipal longings for her powerful father. "Her readiness to abandon herself to such patriarchal figures, said Abraham, was betrayed by her leaving her handbag [in Freud's view, a symbolic representation of the female genitals] in his office on her very first visit" (Sayers, 1991, p. 88). The analysis was not a success. She decided that Freudian psychoanalysis was of only minimal help to her, and she turned instead to self-analysis, a practice she continued for the rest of her life.

During her self-analysis, Horney was strongly influenced by Adler's notion of compensation for inferiority feelings. She was particularly sensitive to Adler's remark that physical unattractiveness was a cause of inferiority feelings. She concluded that she "needed to feel superior because of her lack of beauty

and sense of inferiority as a woman, which led her to masculine protest" by excelling in a male-dominated domain, such as medicine was at the time (Paris, 1994, p. 63). Apparently, she believed that by studying medicine and by promiscuous sexual behavior, she was acting more like a man.

Still Searching for Love

Horney's search for love and security continued when she immigrated to the United States. Her most intense love affair was with another analyst, Erich Fromm, who was 15 years younger. When it ended after 20 years, she was deeply hurt. One event that led to the breakdown of the relationship was that she persuaded Fromm to analyze her daughter Marriane. Fromm helped the woman to understand her hostility toward her mother, giving Marriane the confidence to confront Horney for the first time (McLaughlin, 1998). In 2006, in a commemoration of the 120th anniversary of Horney's birth, Marriane described her mother as a private person who "never was a good team player, never a family person" (Eckardt, 2006, p. 3).

Horney's relentless search for love continued, with younger and younger men, many of whom were analysts whose training she was supervising. Her attitude toward them could sometimes be detached. She told a friend about one young man, saying that she didn't know whether to marry him or get a cocker spaniel. She chose the dog (Paris, 1994).

From 1932 to 1952, Horney served on the faculty of psychoanalytic institutes in Chicago and New York. She was a founder of the Association for the Advancement of Psychoanalysis and the American Institute for Psychoanalysis. In 1941, she began the *American Journal of Psychoanalysis*. For many years she was a popular lecturer, writer, and therapist.

Pause for Reflection

What do you think Horney's own experiences reveal about humans in general? Can you relate to any of her experiences?

The Childhood Need for Safety and Security

Horney agreed with Freud on one major point—the importance of the early years of childhood in shaping the adult personality. However, she differed from him on the specifics of how personality is formed. Horney believed that social forces in childhood, not biological forces, influence personality development. There are neither universal developmental stages nor inevitable childhood conflicts. Instead, the social relationship between children and their parents is the key factor.

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Parents can provide their children with warmth, love, and safety, which reduces anxiety.

Horney believed that childhood was dominated by the **safety need**, by which she meant the need for security and freedom from fear (Horney, 1937). Whether infants experience a feeling of security and an absence of fear is decisive in determining the health of their personality development. A child's security depends entirely on how the parents treats the child. The major way parents weaken or prevent security is by displaying a lack of warmth and affection.

Ways of Undermining a Child's Security

Parents can act in various ways to undermine their child's security and thereby induce hostility. These include obvious preference for one sibling over another, unfair punishment, erratic behavior, promises not kept, ridicule, humiliation, and isolation of the child from peers. Horney argued that children know whether their parents' love is genuine. False demonstrations and insincere expressions of affection do not easily fool children. The child may feel the need to repress the hostility engendered by the parents' undermining behaviors for reasons of helplessness, fear of the parents, need for genuine love, or guilt feelings.

safety need A child's need for security and freedom from fear.

Repressing Hostility Toward Parents

Horney placed great emphasis on the infant's helplessness, which depends totally on their parents' behavior. If children are kept in an excessively dependent state, then their feelings of helplessness will be encouraged. The more helpless children feel, the less they dare to oppose or rebel against their parents. This means that the child will repress the resulting hostility, saying, in effect, "I have to repress my hostility because I need you."

Children can easily be made to feel fearful of their parents through punishment, physical abuse, or more subtle forms of intimidation. The more frightened children become, the more they will repress their hostility. In this instance, the child is saying, "I must repress my hostility because I am afraid of you."

Paradoxically, love can be another reason for repressing hostility toward parents. In this case, parents tell their children how much they love them and how much they are sacrificing for them, but the parents' warmth and affection are not honest. Children recognize that these verbalizations and behaviors are poor substitutes for genuine love and security, but they are all that is available. The child must repress their hostility for fear of losing even these unsatisfactory expressions of love or the opportunity to gain real affection.

Guilt is yet another reason why children repress hostility. They are often made to feel guilty about any hostility or rebelliousness. They may be made to feel unworthy, wicked, or sinful for expressing or even harboring resentments toward their parents. The more guilt the child feels, the more deeply repressed will be the hostility. This repressed hostility, resulting from a variety of parental behaviors, undermines the childhood need for safety and is manifested in the condition Horney called *basic anxiety*.

Basic Anxiety: The Foundation of Neurosis

Horney defined **basic anxiety** as an "insidiously increasing, all-pervading feeling of being lonely and helpless in a hostile world" (Horney, 1937, p. 89). It is the foundation on which all later neuroses develop, and it is inseparably tied to feelings of hostility, helplessness, and fear, she argued (see Hjertass, 2009).

basic anxiety A pervasive feeling of loneliness and helplessness; the foundation of neurosis.

Regardless of how we express basic anxiety, the feeling is similar for all of us. In Horney's words, we feel "small, insignificant, helpless, deserted, endangered, in a world that is out to abuse, cheat, attack, humiliate, betray" (1937, p. 92). In childhood, we try to protect ourselves against basic anxiety in four quite different ways: securing affection and love, being submissive, attaining power, or withdrawing.

Securing Affection

By securing affection and love from other people, the person is saying, in effect, "If you love me, you will not hurt me." There are several ways by which we may gain affection, such as trying to do whatever the other person wants, trying to bribe others, or threatening others into providing the desired affection—maladaptive ways to solicit affection. Research supports the idea that difficult childhood experiences engender feelings of anxiety that then drive desire for affection. In a study of Israeli adults, those who experienced weak relational bonds with their parents in childhood were more anxiously attached and, in turn, felt more entitled to affection in current romantic relationships (Shadach et al., 2018).

Securing affection can serve as a buffer against anxiety. For example, for people especially high in anxious attachment, who desire to experience touch by close others (a signal of their affection), experiencing touch from their partners was especially beneficial for feelings of relationship closeness and relationship quality (Carmichael et al., 2021).

Being Submissive

Being submissive as a means of self-protection involves complying with the wishes of one or more people in our social environment. People high in submissiveness avoid doing anything that might antagonize others. They do not dare to criticize or offend others. They must repress their personal desires and may not defend against abuse for fear that such defensiveness will antagonize the abuser. Such persons seem to be saying, "If I give in, I will not be hurt." This describes Horney's own childhood behavior until the age of 8 or 9. What does the research have to say? In a study of over 1,700 Canadian university students, researchers found that those who had experienced maltreatment as children displayed more submissive patterns of behavior, such as being nonassertive, distant, and self-sacrificing, that fed into interpersonal problems (Paradis & Boucher, 2019). A pattern of submissiveness indeed opens a person up to negative and harmful behaviors from their partner—security at a cost (Williams et al., 2018).

Attaining Power

By attaining power over others, a person can compensate for helplessness and achieve security through success or through a sense of superiority. They may believe that if they have power, no one will harm them. This could describe Horney's childhood once she decided to strive for academic success. This idea also bears out empirically: Research finds that when people have high expectations for affection within romantic relationships and feel those expectations are not being met, they tend to engage in power-seeking tactics when experiencing conflict with their partners. This includes verbal aggression and exacting control and domination (Williams et al., 2018).

Withdrawing

Those first three self-protective devices have something in common—by engaging in any of them the person is attempting to cope with basic anxiety by interacting with other people. The fourth way of protecting oneself against basic anxiety involves withdrawing from other people, not physically but psychologically. People who tend to psychologically withdraw may attempt to become independent of others, not relying on anyone else for the satisfaction of internal or external needs.

The withdrawn person achieves independence with regard to internal or psychological needs by becoming aloof from others, no longer seeking them out to satisfy emotional needs. The process involves a blunting, or minimizing, of emotional needs. By renouncing these needs, the withdrawn person guards against being hurt by other people.

Research shows this pattern in children as young as 4–6 years old. In a study of Jordanian kindergartners, the more their parents engaged with them with rejection and authoritarianism, the more withdrawn the children became (Aldarabah et al., 2019).

Characteristics of Self-Protective Mechanisms

The four self-protective mechanisms Horney proposed have a single goal: to defend against basic anxiety. They motivate the person to seek security and reassurance rather than happiness or pleasure. They are a defense against pain, not a pursuit of well-being or happiness. Another characteristic of these self-protective mechanisms is their power and intensity. Horney believed that they could be more compelling than sexual or other physiological needs. These mechanisms may reduce anxiety, but the cost to the individual is usually an impoverished personality.

Often, people with high neuroses (the historical term for strong anxiety and negative affect) will pursue the search for safety and security by using more than one of these mechanisms, and the incompatibility among them can lay the groundwork for additional problems. For example, a person may be driven by the needs to attain power and to gain affection. A person may want to submit to others while also desiring power over them. Such incompatibilities cannot be resolved and can lead to even more severe conflicts.

Neurotic Needs

Horney believed that any of the self-protective mechanisms could become so permanent a part of the personality that it assumes the characteristics of a drive or need in determining the individual's behavior. She listed 10 such needs, which she termed **neurotic needs** because she considered them to be irrational solutions to one's problems. The 10 neurotic needs are as follows:

Securing Affection

1. Affection and approval

Being Submissive

2. A dominant partner

Attaining Power

3. Power
4. Exploitation
5. Prestige
6. Admiration
7. Achievement or ambition

Withdrawing

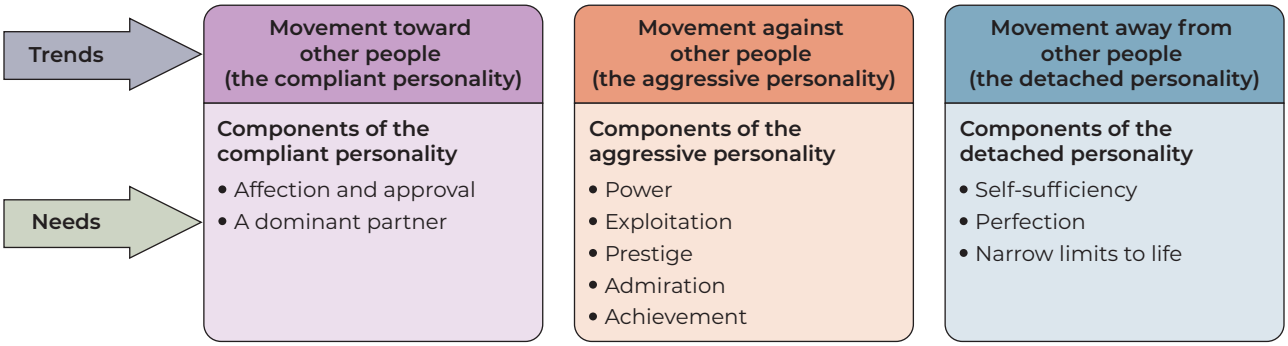
8. Self-sufficiency
9. Perfection
10. Narrow limits to life

The neurotic needs flesh out the four ways of protecting ourselves against anxiety. Gaining affection is expressed in the neurotic need for affection and approval. Being submissive includes the neurotic need for a dominant partner. Attaining power relates to the needs for power, exploitation, prestige, admiration, and achievement or ambition. Withdrawing includes the needs for self-sufficiency, perfection, and narrow limits to life.

neurotic needs Ten irrational defenses against anxiety that can become a permanent part of personality and that affect behavior.

Figure 5.1

Horney's neurotic needs and neurotic trends



Horney noted that we all manifest these needs to some degree. For example, at one time or another, everyone seeks affection or pursues achievement. None of the needs is problematic in an everyday, transient sense. What makes them neurotic is the person's intensive and compulsive pursuit of their satisfaction as the "only" way to resolve basic anxiety, according to Horney. When that happens, the neurotic need becomes increasingly severe, then tyrannical, as it overtakes and comes to dominate the personality (Hess & Hess, 2010). For example, Norwegian adults who scored high in perfectionism were interviewed about their lives, and researchers found that childhood difficulties predicted the people's distancing themselves from others and feeling they need to take responsibility independently (Woodfin et al., 2021). There were four particular themes of the perfectionists' narratives: "A childhood with big responsibilities," "I am still the responsible one," "Keeping others at a distance to protect the inner self," and "Achieving physical distance to get a fresh start."

Satisfying these needs will not make us feel safe and secure but will only help us escape the discomfort caused by our anxiety. They will do nothing for the underlying anxiety. In other words, they will help with the symptoms, but not their cause. Also, when we pursue gratification of these needs solely to cope with anxiety, satisfaction of the need can dominate our personalities.

neurotic trends Three categories of personality profiles express a person's needs; Horney's revision of the concept of neurotic needs.

compliant personality Thoughts, feelings, and behaviors associated with the neurotic trend of moving toward people, such as a need for affection and approval.

Pause for Reflection

Do you think that you use one or two of the four defenses against anxiety more than others? Do these manifest in the neurotic needs?

Neurotic Trends

In her later writings, she reformulated the list of needs (Horney, 1945). From her work with patients, she concluded that the needs could be presented in three groups, each indicating a person's attitudes toward the self and others. She called these three categories of directional movement the **neurotic trends** (refer to Figure 5.1).

Because the neurotic trends evolve from and elaborate on the self-protective mechanisms, we can see similarities with Horney's earlier descriptions. The neurotic trends involve compulsive thoughts, feelings, and behaviors. The trends are displayed indiscriminately, in any and all situations. The neurotic trends are as follows:

- Movement toward other people—the compliant personality
- Movement against other people—the aggressive personality
- Movement away from other people—the detached personality

The Compliant Personality

The **compliant personality** displays thoughts, feelings, and behaviors that reflect a desire to move toward other people. The person has an intense and

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Horney described three personality types: compliant, aggressive, and detached.

continuous need for affection and approval, an urge to be loved, wanted, and protected. Compliant personalities display these needs toward everyone, although they usually have a need for one dominant person, such as a friend or partner, who will take charge of their lives and offer protection and guidance.

Compliant personalities entail garnering support and protection from other people, particularly their partners, through social warmth. They often behave in ways others find attractive or endearing. For example, they may seem unusually considerate, appreciative, responsive, understanding, and sensitive to the needs of others. Compliant people are concerned with living up to others' ideals and expectations, and they act in ways others perceive as unselfish and generous.

In dealing with other people, compliant personalities are conciliatory. They subordinate their personal desires to those of other people. They are willing to assume blame and defer to others, never being assertive, critical, or demanding. They do whatever the situation requires, as they interpret it, to gain affection, approval, and love. Their attitude toward themselves is consistently one of helplessness and weakness. Horney suggested that compliant people are saying, "Look at me. I am so weak and helpless that you must protect and love me."

Consequently, they regard other people as superior, and even in situations in which they are competent, they see themselves as inferior. Because the security of compliant personalities depends on the attitudes and behavior of other people toward them, they become excessively dependent, needing constant approval and reassurance. Any sign of rejection, whether actual or imagined, is terrifying to them, leading to increased efforts to regain the affection of the person they believe has rejected them.

The source of these behaviors is the person's repressed hostility. Horney theorized that compliant persons have repressed strong feelings of defiance and vindictiveness. They have a desire to control, exploit, and manipulate others, the opposite of what they express. Because their hostile impulses must be repressed, compliant personalities become subservient, always trying to please and asking nothing for themselves. There's a history of research that finds that people high in compliance will seek out careers in which they can help people, such as in social work or nursing (e.g., Cohen, 1967).

The Aggressive Personality

Aggressive personalities move against other people. People high in aggressiveness are hostile, and only the most cunning survive. Life is a jungle in which supremacy, strength, and ferocity are the paramount virtues. Although their motivation is the same as that of the compliant type, to alleviate basic anxiety, aggressive personalities never display fear of rejection. They act tough and domineering and show no regard for others. To achieve the control and superiority so vital to their lives, they must consistently perform at a high level. By excelling and receiving recognition, they find satisfaction in having their superiority affirmed by others.

Because aggressive personalities are driven to surpass others, they judge everyone in terms of the benefit they will receive from the relationship. They make no effort to appease others but will argue, criticize, demand, and do whatever is necessary to achieve and retain superiority and power. They drive themselves hard to become the best. As a result, they may actually become highly successful in their careers, although the work itself will not provide intrinsic satisfaction. Like everything else in their lives, work is a means to an end, not

aggressive personality Thoughts, feelings, and behaviors associated with the neurotic trend of moving against people, such as a domineering and controlling manner.

an end in itself. Aggressive personalities may appear confident of their abilities and uninhibited in asserting and defending themselves. However, like compliant personalities, aggressive personalities are driven by insecurity, anxiety, and hostility.

Research supports Horney's idea that people who cope with basic anxiety through evincing aggressive personalities may develop antisocial leadership styles and even excel at work. University students with antisocial leadership style not only ruthlessly self-advance, feel overly competitive, and show signs of narcissism, but they also may experience fears of losing out, being overlooked, or experiencing rejection as well as a drive to strive to avoid inferiority (Basran et al., 2019). Largely replicating the pattern of results found in the United Kingdom and New Zealand, research with Danish managers from private companies within the transport, energy, financial, and manufacturing sectors found that more senior managers were higher in aggressive personality, namely, the Moving Against Others scales of Bold, Colorful, and Imaginative (Gøtzsche-Astrup et al., 2016).

The Detached Personality

People described as having **detached personalities** are driven to move away from other people and to maintain an emotional distance. They must not love, hate, or cooperate with others or become involved in any way. To achieve this total detachment, they strive to become self-sufficient. If they are to function as detached personalities, they must rely on their own resources, which must be well-developed.

Detached personalities have an almost desperate desire for privacy. They need to spend as much time as possible alone, and it disturbs them to share even such an experience as listening to music. Their need for independence makes them sensitive to any attempt to influence, coerce, or obligate them. Detached personalities must avoid all constraints, including timetables and schedules, and long-term commitments such as marriages or mortgages.

They need to feel superior, but not in the same way aggressive personalities do. Because detached people cannot actively compete with other people for superiority—that would mean becoming involved with others—they believe their greatness should be recognized automatically, without struggle or effort on their part. One manifestation of this sense of superiority is the feeling that one is unique, that one is different than everyone else.

Detached personalities suppress or deny all feelings toward other people, particularly feelings of love and hate. Intimacy would lead to conflict, and that must be avoided. Because of this constriction of their emotions, detached personalities place great stress on reason, logic, and intelligence. Indeed, in a study of Indian young adults, the tendency to move away from others, or have a detached personality, contributed to insecure interpersonal attachment (Maher et al., 2015).

You may have noticed the similarity between the three personality types proposed by Horney and the styles of life in Adler's personality theory. Horney's compliant personality is similar to Adler's getting type, the aggressive personality is like the dominant or ruling type, and the detached personality is similar to the avoiding type. This is yet another example of how Adler's ideas influenced later explanations of personality.

Pause for Reflection

Which neurotic trend or personality type most reflects your way of being? Your best friend's way of being?

The Dominance of One Trend

Horney found that in the neurotic person, one of these three trends is dominant, whereas the other two are present to a lesser degree. For example, the person who is predominantly aggressive also has some need for compliance and detachment. The dominant neurotic trend is the one that determines the person's thoughts, feelings, attitudes, and behaviors toward others. This is the mode of acting and thinking that best serves to control basic anxiety, and any deviation from it is threatening to the person. For this reason, the other two trends must actively be repressed, which can lead to additional problems. Any indication that a repressed trend is pushing for expression causes conflict within the individual.

Conflict

In Horney's system, **conflict** is defined as the basic incompatibility of the three neurotic trends; this conflict is the core of neurosis. All of us, whether "neurotic"

detached personality Thoughts, feelings, and behaviors associated with the neurotic trend of moving away from people, such as an intense need for privacy.

conflict To Horney, the basic incompatibility of the neurotic trends.

or "normal" according to Horney, suffer some conflict among these basically irreconcilable modes. Horney argued that the difference between the normal person and the neurotic person lies in the intensity of the conflict; it is much more intense in the neurotic person. Neurotic people must battle to keep the nondominant trends from being expressed. They are rigid and inflexible, meeting all situations with the behaviors that characterize the dominant trend, regardless of their suitability. Some research supports the idea that incompatibility in the trends can cause conflict. Undergraduate students who had high implicit self-esteem but were especially compliant (agreeable) experienced higher neurotic distress than those who had high implicit self-esteem but were less compliant (Robinson & Wilkowski, 2006). The researchers argued that the implicit self-esteem represented internal drive to benefit the self but not others and that agreeableness represented an external drive to benefit others, which came into conflict, causing neuroses. Of course, modern psychology acknowledges that personality is on a spectrum, and "neurotic" and "normal" may be a false dichotomy.

In the person who is not neurotic, all three trends can be expressed as circumstances warrant. A person may sometimes be aggressive, sometimes compliant, and sometimes detached. The trends are not mutually exclusive and can be integrated harmoniously within the personality. The normal person is flexible in behaviors and attitudes and can adapt to changing situations.

Research on Neurotic Trends

Although Horney did not use psychological measures, later researchers developed several based on portions of Horney's theory.

A 35-item self-report inventory, the CAD, was devised to measure Horney's three neurotic trends, the Compliant, Aggressive, and Detached personality types (Cohen, 1967). The Horney-Coolidge Type Indicator (HCTI), a 57-item self-report inventory, is another measure of Horney's three neurotic trends. Research with children and with college students confirmed the HCTI as a valid measure of the compliant, aggressive, and detached personality types (Coolidge et al., 2001, 2010).

Other studies using college student responses on the HCTI found that men tended to score higher on the aggressive and detached scales, whereas women scored higher in compliance. The research also showed a relationship between Horney's three neurotic types and various personality disorders. For example, aggression and detachment correlated highly with psychoticism; compliance was associated with neuroticism (Coolidge et al., 2001; Shatz, 2004). An investigation with almost 4,000 US university students found that compliant personality was associated with warm submissiveness, aggressive personality with hostile dominance, and detached personality with hostile or cold submissiveness (Carlson et al., 2022). A version of the HCTI, the Horney-Coolidge Tridimensional Inventory, was developed for use with children and adolescents ages 5 to 17 (Coolidge et al., 2010).

Research using the CAD inventory found that college students preparing for careers in helping professions such as nursing and social work scored higher in compliance than did students considering careers in business or science. The business students, whose work entails competition, scored higher on aggression. Science students scored highest on the detached scale. These results appear to be consistent with Horney's descriptions of the three neurotic trends (Cohen, 1967; Rendon, 1987).

On the other hand, in a study with over 650 US college students, field of study (i.e., business, education, arts and sciences) was not associated with personality (neurotic trends; Walsh et al., 2016). However, that study did find differences in how sensitive to ethical concerns students were, with individuals high in compliance responding to moral dilemmas with more concern, and individuals with higher aggressive personalities responding to them with less concern. Another study, conducted in Iran, found that people who scored high in aggression had significantly more automobile accidents than people who scored low on aggression (Haghayegh & Oreyzia, 2009). Research with US adults finds that understanding people's compliance, aggression, and detachment can help in understanding personality disorders from a cluster perspective (Coolidge et al., 2004). For example, people lower in compliance and higher in aggression and detachment were more likely to show signs of paranoid, schizoid, and schizotypal personality disorders (Cluster A in DSM-5).

Research indicates that neurotic trends in childhood predict personality, behavior, and outcomes years later. For example, a study dealing with the neurotic trends of moving against people (aggressive) and moving away from people (detached) compared measures from aggressive and detached children at ages 7 to 13 with their behavior five to seven years later (Moskowitz & Schwartzman, 1989). Those high in aggressiveness were found to be low in school achievement and to have psychiatric problems. Those who were detached or withdrawn were found to have inaccurate and negative self-images.

Other researchers studied Horney's three proposed neurotic trends in childhood and followed up 30 years later (Caspi et al., 1987, 1988). They defined moving toward people / compliant as "dependent," moving against people / aggressive as "ill-tempered," and moving away from people / detached as "shy." Ill-tempered children, both boys and girls, tended to become ill-tempered adults, prone to divorce and downward occupational mobility. Gender differences were found in the shy and dependent types. Shy boys became aloof adults who experienced marital and job instability. On the other hand, shy girls manifested no such problems later in life. Dependent boys became agreeable, socially poised, warm, and giving adults with stable marriages and careers; the opposite was found for dependent girls (Caspi et al., 1989). Thus, Horney's proposed personality types had predictive value for later behavior.

Neurotic Competitiveness

In addition to neurotic trends, which can vary across people, Horney spoke of **neurotic competitiveness** as a major aspect of contemporary culture. She defined it as an indiscriminate need to win at all costs. The attitude of the person manifesting this need can be "compared to that of a jockey in a race, for whom only one thing matters—whether he is ahead of the others" (Horney, 1937, p. 189).

Research on this topic highlights that such high levels of ruthless competitiveness bring with them personal and interpersonal problems. Self-report inventories, such as the Hyper-competitive Attitude Scale (HCA) and the Neurotic Competitiveness Inventory (NCI), were developed to measure the concept of neurotic competitiveness (Deneui, 2001; Ryckman et al., 1994). The tests contain such items as "Winning in competition makes me feel more powerful as a person." Subjects evaluate the items on a five-point scale ranging from "never true of me" to "always true of me."

People who scored high on competitiveness were also high in narcissism, neuroticism, authoritarianism, dogmatism, and mistrust, and low in self-esteem and psychological health. Those who deliberately avoided competitiveness showed higher levels of neuroticism and a lower drive to prove themselves in competitive situations (Ryckman et al., 2009). Hypercompetitive men were also found to be higher in "hypermasculine" or "macho" personalities and more likely to hold the belief that women are sex objects who deserved neither respect nor consideration.

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Neurotic competitiveness might lead to accomplishments, but it might also cause others distress.

Backing up the idea that this is a cultural phenomenon, a comparison of college students in the United States and the Netherlands found that the Americans scored higher in hypercompetitiveness, suggesting cultural differences in this aspect of their personality (Dru, 2003; Ryckman et al., 1990, 1994, 2002).

Different Types of Competitiveness

Researchers have also sought to distinguish different types of competitiveness. One research group compared competing to win (CW) in order to dominate others and competing to excel (CE) to surpass one's personal goals. CE was linked to high self-esteem and low depression among high school students. In general, teen boys scored higher on CW than teen girls. However, girls who did score high on CW showed greater depression and loneliness and had fewer close friends than girls who scored low on this drive to compete in order to win (Hibbard & Buhrmester, 2010).

Creating a new measure called the Multidimensional Competitive Orientation Inventory (Orosz et al., 2018), researchers worked with data from over 2,500 diverse Hungarian adolescents, young adults, and adults to define four faces of competitive personality, some healthier than others: hypercompetitive orientation (HCO), self-developmental competitive orientation (SDCO), anxiety-driven competition avoidance (ADCA), and lack of interest (LIC) toward competition. People high in HCO experience more negative effects of perfectionism, are concerned about performance at work, and have very high personal standards of perfectionism. Individuals high in SDCO

neurotic competitiveness An indiscriminate need to win at all costs.

score higher in resilience but also experience more negative effects of perfectionism and have very high personal standards of perfectionism. Others high in ADCA are less resilient, see more discrepancies between their performance and their high standards of perfectionism, and experience negative effects of their perfectionism. Finally, people who score high in LIC do not feel they have discrepancies between their performance and a high standard of perfectionism and are less concerned about perfect performance at work.

Pause for Reflection

Are you competitive? If so, in what way?

The Idealized Self-Image

Horney argued that all of us, normal or neurotic, construct a picture of ourselves that may or may not be based on reality. Horney's own search for self was difficult and long-lasting. At age 21, she wrote, "There's still such chaos in me. . . . Just like my face: a formless mass that only takes shape through the expression of the moment. The searching for ourselves is the most agonizing" (Horney, 1980, p. 174).

In nonneurotic people, the self-image is built on a realistic appraisal of our abilities, potentials, weaknesses, goals, and relations with other people. This self-image provides a sense of unity and integration to the personality and a framework within which to approach others and ourselves. If we are to realize our full potential, a state of self-realization, our self-image must clearly reflect our true self.

Neurotic people, who experience conflict between incompatible modes of behavior, have personalities characterized by disunity and disharmony. They construct an **idealized self-image** for the same purpose as normal people do: to unify the personality. But their attempt is undermined because their self-image is not based on a realistic appraisal of their strengths and weaknesses. Instead, it may be based on an illusion, an unattainable ideal of absolute perfection.

Tyranny of the Shoulds

In attempting to realize this unattainable ideal, neurotic people engage in what Horney called the **tyranny of the shoulds**. They tell themselves they should be the best or most perfect student, spouse, parent, lover, employee, friend, or child. Because they find their real self-image so undesirable, they believe they must live up to their illusory, idealized self-image, in which they see themselves in a highly positive light, for example, being virtuous, honest, generous, considerate, and courageous.

In doing so, they deny their real selves and try to become what they think they should be, or what they need to be to match their idealized self-image. However, their efforts are doomed to failure. They can never achieve their unrealistic self-image and end up in a state of self-hatred with no ability to forgive themselves or others (Kerr, 1984).

Some research has been done on the effects of "shoulds." Research with college students asked them to recall three things they did during the week prior to the study. They were also asked to indicate whether they did those things because they felt they should or ought to do them, or whether they had really wanted to do them. Students who had done more things because they genuinely wanted to, rather than because they felt they should, scored significantly higher on general life satisfaction than those whose behavior was directed primarily by what they believed they ought to do (Berg et al., 2001).

The Self-Image

Although a neurotic or idealized self-image does not coincide with reality, it is real and accurate to the person who created it. Other people can easily see through this false picture, but the neurotic person cannot. The neurotic person believes that the incomplete and misleading self-picture is real. The idealized self-image is a model of what the neurotic person thinks they are, can be, or should be.

The neurotic self-image is a poor substitution for a reality-based sense of self-worth. The neurotic has little self-confidence because of insecurity and anxiety, and the idealized self-image does not allow for correction of those deficiencies. It provides only an illusory sense of worth and alienates the neurotic person from the true self.

Developed to reconcile incompatible modes of behavior, the idealized self-image becomes just one more

idealized self-image For nonneurotic people, the self-image is an idealized picture of oneself built on a flexible, realistic assessment of one's abilities. For neurotic people, the self-image is based on an inflexible, unrealistic self-appraisal.

tyranny of the shoulds An attempt to realize an unattainable idealized self-image by denying the true self and behaving in terms of what we think we should be doing.

element in that conflict. Far from resolving the problem, it adds to a growing sense of futility. The slightest crack in the neurotic idealized self-picture threatens the false sense of superiority and security the whole edifice was constructed to provide, and little is needed to destroy it. Horney suggested that the neurotic self-image is like a house filled with dynamite, with the always-ready potential for self-destruction. Indeed, in a study with professors who were high in maladaptive perfectionism—which "ensues from punishing and unattainable standards that reflect an inadequate sense of self and that can lead to unyielding self-criticism" (p. 511)—also experienced higher levels of psychological distress (Dunn et al., 2006). Accordingly, people with neurotic self-images need defenses against the conflict between the "shoulds" and the real self.

A realistic self-image, on the other hand, is flexible and dynamic, adapting as the individual develops and changes. It reflects strengths, growth, and self-awareness. The realistic image is a goal, something to strive for, and as such it both reflects and leads the person. By contrast, the neurotic self-image is static, inflexible, and unyielding. It is not a goal but a fixed idea, not an inducement to growth but a hindrance demanding rigid adherence to its proscriptions.

Externalization

One way in which neurotic people attempt to defend themselves against the inner conflicts caused by the discrepancy between idealized and real self-images is by **externalization**, which in Horney's view is projecting the conflicts onto the outside world. This process may temporarily alleviate the anxiety caused by the conflict but will do nothing to reduce the gap between the idealized self-image and reality.

Externalization involves the tendency to experience conflicts as though they were occurring outside of oneself. It also entails depicting external forces as the source of the conflicts. For example, neurotic people who experience self-hatred because of the discrepancy between real and idealized selves may project that hatred onto other people or institutions and come to believe that the hatred is emanating from these external sources and not from themselves. Such a pattern of defensiveness through externalization can lead to maladaptive behaviors and negative effects on well-being. For example, one psychoanalytic therapist applied Horney's framework to shed light on how a couple's unique self-images and conflicts interact to create more conflict: "The relationship of two people, their shared journey, each with his or her character structure and idealized image, frequently creates severe strife due to opposing claims each person makes on themselves and the other. Such conflicts within intimate relationships require radical defensive measures such as alienation, idealization, and externalization. As these defensive measures are lived out interpersonally with the partner, further conflict ensues." (Horwitz, 2001, p. 143)

externalization A way to defend against the conflict caused by the discrepancy between an idealized and a real self-image by projecting the conflict onto the outside world.

feminine psychology To Horney, a revision of psychoanalysis to encompass the psychological conflicts inherent in the traditional ideal of womanhood and women's roles.

womb envy The envy a male feels toward a female because she can bear children and he cannot. Womb envy was Horney's response to Freud's concept of penis envy in females.

Feminine Psychology

Early in her career, Horney expressed her disagreement with Freud's views on women. She began work on her version of **feminine psychology** in 1922, the year she became the first woman to present a paper on the topic at an international psychoanalytic congress. That meeting, held in Berlin, was chaired by Sigmund Freud.

Horney was especially critical of Freud's notion of penis envy, which she believed was derived from inadequate evidence (that is, from Freud's clinical interviews with neurotic women). Freud described and interpreted this alleged phenomenon from a strictly male point of view in a place and time when women were considered second-class citizens.

Freud suggested that women were victims of their anatomy, forever envious and resentful of men for possessing a penis. Freud also concluded that women had poorly developed superegos (a result of inadequately resolved Oedipal conflicts), and inferior body images, because women believed they were really castrated men.

Womb Envy

Horney countered these ideas by arguing that men envied women because of their capacity for motherhood. Her position on this issue was based on the pleasure she said she had experienced in childbirth. She uncovered in her male patients what she called **womb envy**. "When one begins to analyze men only after a fairly long experience of analyzing women, one receives a most surprising

impression of the intensity of this envy of pregnancy, childbirth, and motherhood" (Horney, 1967, pp. 60–61).

Men have such a small part to play in the act of creating new life that they must sublimate their womb envy and overcompensate for it by seeking achievement in their work (Gilman, 2001). Womb envy and the resentment that accompanies it are manifested unconsciously in behaviors designed to disparage and belittle women and to reinforce their inferior status. By denying women equal rights, minimizing their opportunities to contribute to society, and downgrading their efforts to achieve, men retain their so-called natural superiority. Underlying such typical male behavior is a sense of inferiority deriving from their womb envy. In a summary and synopsis of work on womb envy, one modern scholar writes, "It seems, then, that the link between womb envy on the one hand and femiphobia and misogyny on the other is various psychological defences. Of these, *reaction formation* ["whereby one (possibly unconscious) emotion deemed socially unacceptable is replaced by a more socially acceptable emotion that is the opposite of the original emotion"] appears to be the most widely cited." (p. 153, Bayne, 2011).

Horney did not deny that many women believed themselves to be inferior to men. What she questioned was Freud's claim of a biological basis for these feelings. If women feel themselves to be unworthy, she argued, it is because they have been treated that way in male-dominated cultures. After generations of social, economic, and cultural discrimination, it is understandable that many women perceive themselves in that way.

The Flight from Womanhood

As a result of these feelings of inferiority, women may choose to deny their femininity and to wish, unconsciously, that they were men. Horney referred to this as the "flight from womanhood," a condition that can lead to sexual inhibitions (Horney, 1926). Part of the sexual fear associated with this condition arises from childhood fantasies about the difference in size between the adult penis and the female child's vagina and the potential pain of sex. This produces a conflict between the unconscious desire to have a child and the fear of intercourse. If the conflict is sufficiently strong, it can lead to emotional disturbances that manifest themselves in relations with men. These women distrust and resent men and reject their sexual advances. This idea has also been extended to a flight from feminine behaviors because the culture overly values masculine traits.

The Oedipus Complex

Horney also disagreed with Freud about the nature of the Oedipus complex. She did not deny the existence of conflicts between children and their parents, but she did not believe they had a sexual origin. By removing sex from the Oedipus complex, she reinterpreted the situation as a conflict between dependence on one's parents and hostility toward them.

We discussed parental behaviors that undermine the satisfaction of the childhood need for safety and security and lead to the development of hostility. At the same time, the child remains dependent on the parents so that expressing hostility is unacceptable. The child is saying, in effect, "I have to repress my hostility because I need you."

As we noted, the hostile impulses remain and create basic anxiety. To Horney, "The resulting picture may look exactly like what Freud describes as the Oedipus complex: passionate clinging to one parent and jealousy toward the other" (Horney, 1939, p. 83). Thus, her explanation for Oedipal feelings lies in neurotic conflicts that result from parent—child interactions. These feelings are not based on sex or other biological forces, nor are they universal. They develop only when parents act to undermine their child's security.

Motherhood or Career?

As an early feminist, Horney expressed concern about the psychological conflicts in defining women's roles and pointed out the differences between the traditional ideal of womanhood with the more modern view (Horney, 1967). In the traditional scheme, promoted and endorsed by most men of this time in history, the woman's role was to love, admire, and serve a man. Her identity was solely a reflection of her husband's.

Horney argued that women must seek their own identity, as she did, by developing their abilities and pursuing careers. These contrasting traditional and more modern roles create conflicts that some women to this day have difficulty resolving. Drawing on Horney's work, another feminist at the height of the women's movement in the 1980s wrote that:

> modern women are caught between wanting to make themselves desirable to men and pursuing their own goals. The competing purposes elicit conflicting behaviors: seductive versus aggressive, deferential versus ambitious. Modern women are torn between love and work and are consequently dissatisfied in both. (Westkott, 1986, p. 14)

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As Horney predicted, even in modern times, many women experience a tension in trying to balance work with motherhood.

It remains as troublesome for some women in the 21st century to balance marriage, motherhood, and a career as it was for Karen Horney in the 1930s. Her decision to develop her abilities and focus on her work brought her enormous satisfaction, but she continued throughout her life to search for security and love.

For example, in research that surveyed women in their senior year of college and seven years later, most women initially wanted successful careers, to get married, and to have children (Hoffnung, 2004). Seven years later, not everyone reached all three goals: although whether the women were married did not matter for whether they went on to gain advanced degrees or higher-status careers, whether they had children did. Mothers had fewer advanced degrees and high-status careers than women who did not have children.

Cultural Influences on Feminine Psychology

Horney recognized the impact of social and cultural forces on the development of personality. She also noted that different cultures and social groups view women's roles in different ways. Thus, there can be many different feminine psychologies. "The American woman is different from the German woman;" she wrote, "both are different from certain Pueblo Indian women. The New York society woman is different from the farmer's wife in Idaho . . . Specific cultural conditions engender specific qualities and faculties, in women as in men" (Horney, 1939, p. 119).

One example of the power of culture to shape women's lives and expectations can be found in what was once considered traditional Chinese society. As far back as the first millennium BCE, women were subordinate to men. Society was governed by the belief that the universe contained two contrasting yet interacting elements, *yin* and *yang*. *Yang* represents the male element and contains all that is vital, positive, strong, and active. *Yin* represents the female element and contains all that is dark, weak, and passive. Over time, these elements came to form a hierarchy in which men were considered superior and women inferior.

This idea became part of the teaching of the Chinese philosopher Confucius (551–479 BCE), whose work was the ruling ideology of China for centuries. Strict rules of conduct were established for women. They were expected to be submissive, obedient, respectful, chaste, and unselfish. The Chinese word for woman literally meant "inside person," denoting her status as restricted to the confines of the home.

> A respectable Chinese woman was not to be seen or heard. She was expected never to be freed from male domination, as her duty was to obey her father at home, her husband after marriage, and her eldest son when widowed. Men were counseled against listening to women for fear that disaster would result. The exercise of willfulness and ambition, considered heroic in a man, was considered wicked and depraved in a woman. (Loo, 1998, p. 180)

When we contrast this attitude with the widely accepted views of a woman's place in contemporary American society, and in the modern Chinese society as well, we can easily accept Horney's position that the feminine psyche is influenced, even determined, by cultural forces.

As another example, in a focus group study of African American and Vietnamese American women, researchers found that all the women viewed themselves as caretakers and also responsible to fill many other roles; but women in the two cultural groups had different opinions about interpersonal interactions and societal expectations (Abrams et al., 2016). For example, African American women emphasized the importance of behaving with strength, whereas Vietnamese American women emphasized the importance of behaving with meekness, according to their own cultures' expectations. Across cultures, women feel pressure to behave in certain ways, and specific cultures shape those pressures.

What Did Freud Say About Horney?

Freud did not respond directly to Horney's challenge to his views on women, nor did he alter his concept of the Oedipus complex. However, in a thinly veiled allusion to

Horney's work, he wrote, "We shall not be very greatly surprised if a woman analyst, who has not been sufficiently convinced of the intensity of her own wish for a penis, also fails to attach proper importance to that factor in her patients" (Freud, 1940). Of Horney herself, Freud remarked, "She is able but malicious" (quoted in Blanton, 1971, p. 65). As a result, Horney was bitter about Freud's failure to recognize the legitimacy of her views.

Pause for Reflection

Which aspects of Horney's theories make sense in light of what you know about psychology? Which aspects conflict with your knowledge?

Questions About Human Nature

Horney's perspective on human nature is considerably more optimistic than Freud's. One reason for her optimism was her belief that biological forces do not condemn us to conflict, anxiety, neurosis, or universality in personality. To Horney, each person is unique. Neurotic behavior, when it occurs, results from social forces in childhood. Parent–child relationships will either satisfy or frustrate the child's need for safety. If that need is frustrated, the outcome is neurotic behavior. Neuroses and conflicts can be avoided if children are raised with love, acceptance, and trust.

Each of us has the innate potential for self-realization, and this is our ultimate and necessary goal in life. Our intrinsic abilities and potential will blossom as inevitably and naturally as an acorn grows into an oak tree. The only thing that can obstruct our development is the thwarting of our need for safety and security in childhood.

Horney also believed that we have the capacity to consciously shape and change our personality. Because human nature is flexible, it is not formed into immutable shapes in childhood. Each of us possesses the capacity to grow. Therefore, adult experiences may be as important as those of childhood.

So confident was Horney of our capacity for self-growth that she emphasized self-analysis in her therapeutic work as well as in her own life. In her book entitled *Self-Analysis* (Horney, 1942), she noted our ability to help resolve our own problems. On the issue of free will versus determinism, then, Horney argued in favor of the former: We can all shape our lives and achieve self-realization.

Assessment in Horney's Theory

The methods Horney used to assess the functioning of the human personality were essentially those employed by Freud—free association and dream analysis—but with some modification. The most basic difference in technique between Horney and Freud was in the relationship between analyst and patient. Horney believed that Freud played too passive a role and was too distant and intellectual. She suggested that analysis should be an "exquisitely cooperative enterprise" between patient and therapist (Horney quoted in Cherry & Cherry, 1973, p. 84).

Although Horney kept a couch in her office, she did not use it with every patient. She adopted an attitude she called constructive friendliness and wrote that: "This is something one needs to try through trial and error, asking if the patient operates better lying on the couch or sitting upright. It is particularly helpful to encourage a patient so he feels free to sit up, lie down, walk around, or whatever he wants" (Horney, 1987, p. 43).

Like the theorists before her, Horney used the case study method. Therefore, her approach, data, and interpretations are subject to the same criticisms made earlier of the work of Freud, Jung, and Adler. The weaknesses inherent in the case study method apply to her work as well as to their work.

Horney was opposed to taking verbatim notes of her patients' recollections. "I don't see how anybody can employ a wholehearted receptivity and productivity of attention at the same time that he is anxiously scribbling everything down" (Horney, 1987, p. 30). As with Freud, Jung, and Adler, then, we do not have complete records of her analytic sessions and the data she collected during them. However, she made efforts to be rigorous and scientific in her clinical observations, formulating hypotheses, testing them in therapeutic situations, and maintaining that her data were tested the same way scientists in other fields test theirs.

Free Association

With free association, Horney did not follow Freud's lead in trying to probe the unconscious mind. She believed that patients could easily distort or hide aspects of their inner lives or falsify feelings about events that they remembered. Instead, Horney focused on her patients' visible emotional reactions, believing that these could explain her patients' thoughts, feelings, and attitudes. She did not delve into presumed infantile sexual fantasies but inquired about the early years of

patients' life only after evaluating their present feelings, beliefs, attitudes, defenses, and conflicts.

Horney believed that each thought, feeling, or attitude resulted from a deeper, preexisting attitude, which in turn had resulted from a deeper one, and so on. Through free association, the analyst gradually uncovered the patient's early experiences and source of feelings similar to peeling the layers of an onion.

Dream Analysis

Horney believed that dream analysis could reveal a person's true self and that dreams represented attempts to solve problems in constructive or neurotic ways. Dreams can show us a set of attitudes that may differ from those of our self-image. She did not offer a list of universal dream symbols but insisted that each dream be explained within the context of the patient's conflict. Focusing on a dream's emotional content, she concluded that the "safest clue to the understanding of a dream is in the feelings of the patient as he has them in the dream" (Horney, 1987, p. 61).

Highlights

Research on Horney's Ideas

People who score high in the aggressive neurotic trend:

- May not do well in school
- May have mental health issues
- Are more likely to major in business than in the helping professions

People who score high in neurotic competitiveness tend to be:

- Neurotic
- Narcissistic
- Authoritarian
- Low in self-esteem

Reflections on Horney's Theory

Contributions of Horney's Theory

Horney's contributions, although impressive, are not as well known or recognized within psychology as those of Freud, Jung, and Adler. This is both unfortunate and unsurprising given the misogynistic beginnings of personality psychology. However, her work drew a large public following, partly because of her ideas' reflecting observable patterns of behavior and partly because of her personal qualities. A student recalled:

> There was about her an air of wholeness, of certainty, of total dedication and commitment, of a conviction that her ideas were valuable, that they were worth sharing with colleagues and students, because knowing them would make a difference to helping those in need. (Clemmens, 1987, p. 108)

These characteristics are also evident in her books, which were written in a style readily understood by people who do not have professional analytical training. Her theory has a commonsense appeal, and for many people it seems applicable to their own personality or to that of a relative or friend.

Horney's ideas may be more relevant to problems inherent in society today than the ideas of Freud, Jung, or Adler are. Many personality researchers regard Horney's conception of the neurotic trends as a valuable way to categorize deviant behavior. Others accept Horney's emphasis on self-esteem, the need for safety and security, the role of basic anxiety, and the importance of the idealized self-image.

Karen Horney's focus on women's psychology was essential to move the field of psychology forward, both in terms of theoretical and practical rigor (e.g., being applicable to more people) and in terms of fairness. She pointed out pressures on women and men's maintenance of cultural norms that subjugate women, which have been since studied and documented. Her work had a significant impact on the personality theories developed by Erik Erikson and Abraham Maslow, as we will discuss later. Maslow used her concept of the real self and self-realization, and her notion of basic anxiety is similar to Erikson's concept of basic mistrust.

Criticisms of Horney's Theory

Although Horney was trained in orthodox Freudian theory and paid tribute to Freud for providing the foundation and tools for her work, her theory deviated from psychoanalysis in several ways. Not surprisingly, she received a great deal of criticism from those who continued to adhere to Freud's position. To the Freudians, Horney's denial of the importance of biological instincts and her reduced emphasis on sexuality and the unconscious were obvious weaknesses. Horney's personality theory has also been criticized on the grounds that it is not as completely or consistently developed as Freud's.

Another criticism is that her observations and interpretations were too greatly influenced by the middle-class American culture in which she developed so much of her theory. Of course, as we have discussed, and will continue to discuss throughout the book, all personality theorists are affected by the class, culture, and time in which they worked.

Renewed Interest in Horney's Ideas

Primarily due to the women's movement that began in the 1960s, Horney's books again attracted attention. Her writings on feminine psychology and sexuality may constitute the most influential of her contributions, of value to scholars on the role of women in society well more than 50 years after Horney's death (see Gilman, 2001; Miletic, 2002). "Had she written nothing else," a biographer stated, "these papers would have earned Horney a place of importance in the history of psychoanalysis" (Quinn, 1987, p. 211).

The work of the Karen Horney Clinic and the Karen Horney Psychoanalytic Institute (a training center for analysts), both in New York City, attests to the lasting impact of her work. The clinic, established in 1945, continues to treat people with what Horney would consider mild to moderate neurotic problems at a moderate cost (Paul, 2010). A loyal, albeit small, group of disciples carries on her work, much of which is published in the *American Journal of Psychoanalysis*.

Pause for Reflection

Are there aspects of Horney's theory you think are underappreciated?

DEI Spotlight

Horney's Theory and Diversity, Equity, and Inclusion

Horney's theory focuses on people's need for safety, the various ways we can deal with anxiety, and especially how people—namely women—should not be limited by the oppressive theories of others in her time. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individual. Here we focus on Dr. Jô Gondar, a Brazilian psychoanalyst and professor who has extended the application of psychoanalytic theory to understanding the effects of historical injustices in Brazil. Following the example of Karen Horney insofar as she pushes applied psychoanalytic theory, which originated with European White men, to understand culturally diverse contexts, Dr. Gondar has made important contributions to both DEI and psychoanalytic theory. Comparing and contrasting the evolution of psychoanalysis in South America as compared to the United States and Europe, she concludes,

> Psychoanalysis remains alive in South America. It is possible that, due to the experience with dictatorships and their traumatic effects, analysts were forced to create more malleable tactics, involving not only a broader relationship in the social field, but also to connect with other ways of thinking. It is not without interest to realize that where it has been showing more openness to interaction with the environment—social, political, cultural—psychoanalysis has been more powerful. (Gondar, 2017, p. 5)

Dr. Gondar has also applied a psychoanalytic lense to describe the case of racism in Brazil, which was established by diverse migrants. She points out that the first migrants were actually African, and yet racism against people of that ethnic origin continues. She points out that their migration was forced through slavery and says accordingly, "Racism against black individuals is developed in Brazil in a more subtle and complex manner compared with other places" (Gondar, 2020, p. 159). Much of this complexity comes from the culture's "disavowing" that the history of racism continues into the modern society. Such a disavowing leaves Black people who experience discrimination doubly harmed. Dr. Gondar asks, "What is it like to live in a country that denies, to black people, the very perception that they are being segregated?" (p. 162) and tries to answer:

> Disavowal is not only a matter of speaking: it is one's affections, one's suffering, and oneself as a subject who is being discredited. . . . The whiteness model leads to

DEI Spotlight, continued

Horney's Theory and Diversity, Equity, and Inclusion

> such a situation. Concealed, not admitted, disavowed, it makes those discriminated against doubt themselves and reality. It is this project that black movements today denounce. And for this reason, one can understand a current proposal of black movements in Brazil—of those who insist on affirming themselves as black . . . (p. 162).

This understanding of the psychological effect of denying the ongoing effects of historical trauma in Brazil may allow for honest conversation and just action. Indeed, Dr. Gondar concludes by saying, "Revealing these tensions is imperative for any change in our micro- and macropolitical landscape. Maybe this is our chance to start" (p. 162). In addition to her research and theorizing, Dr. Gondar influences the next generation of Brazilian thinkers in her teaching as professor in the Social Memory Graduate Program of the Federal University of Rio de Janeiro State.

Family and Society. Karen Horney's theories about women, as well as her personal striving to engage in intellectual activities that were deemed appropriate only for men in her lifetime, were essential to the feminist movement, for which she was a harbinger. She wrote, "Once and for all, we should stop bothering about what is feminine and what is not. Such concerns only undermine our energies. Standards of masculinity and femininity are artificial standards. All that we definitely know at present about sex differences is that we do not know what they are" (1935).

This perspective is still valuable today. Women are still expected to take care of the housework and childcare and are socially punished when they do not meet these expectations. Accordingly, they experience the very tension between motherhood and career that Horney experienced and described. This has implications for how family units function and the well-being of women who desire to pursue meaning outside of the home.

Moreover, women, though just as intelligent and capable as men, are still made to feel they do not belong in more "masculine" spaces. Karen Horney and other women were essential in making psychology a field in which women could participate and feel like they belong. Compare, for example, psychology and philosophy, which have a shared history and topic overlap (though different methods, with psychology employing reasoning and science and philosophy employing only reasoning). The majority of students in psychology today are women, whereas the majority of students in philosophy are men—and this has a lot to do with gender stereotypes and whether students feel they belong in the field (Maranges et al., 2023a, 2023b). Modern research investigated how American and Canadian college students perceived their traits that are often stereotyped and how those perceptions shape their feelings of belonging and decision to major in psychology or philosophy. Students reported their own levels of brilliance, intellectual combativeness, and systematizing (stereotypical masculine traits) and empathizing (a stereotypical feminine trait) as well as life goals, such as prioritization of money, family, and status. Men thought they were more brilliant, intellectually combative, and systematizing than women thought they were, but the reverse was true about empathizing. Paralleling the tension that Horney described, women more than men prioritized making money from but also having a family during their careers, whereas men who were particularly combative prioritized status in their career. Based on those patterns, men felt they belonged in philosophy, whereas women felt they belonged in psychology. Karen Horney predicted this; after defending against Freud's misogynistic view of penis envy, she said:

> There is one further consideration. Owing to the hitherto purely masculine character of our civilization, it has been much harder for women to achieve any sublimation that would really satisfy their nature, for all the ordinary professions have been filled by men. This again must have exercised an influence upon women's feelings of inferiority, for naturally they could not accomplish the same as men in these masculine professions and so it appeared that there was a basis in fact for their inferiority. It seems to me impossible to judge to how great a degree the unconscious motives for the flight from womanhood are reinforced by the actual social subordination of women. One might conceive of the connection as an interaction of psychic and social factors. (1932).

DEI Spotlight, continued

Horney's Theory and Diversity, Equity, and Inclusion

There is hope: Many fields, including philosophy, are becoming more gender equal, and in society generally, there is movement toward understanding the pervasive and problematic nature gender stereotypes and movement away from those stereotypes. Horney's criticism of focusing on masculine and feminine as a problematic dichotomy is also consistent with more modern understandings of gender as nonbinary.

Chapter Summary

Karen Horney was essential in moving forward personality psychology and, especially, psychoanalytic theories, notably as a feminist. Karen Horney differed from Freud in her views on the psychology of women and her emphasis on social rather than biological forces as shapers of personality. Her childhood experiences helped shape her lifelong quest for love and security as well as her theory of personality.

The need for safety refers to security and freedom from fear. It depends on being loved and wanted as a child. When security is undermined, hostility is induced. This idea has been supported by decades of research—feeling safe and loved is essential to well-being. Children may repress this hostility out of a sense of helplessness, fear of the parents, the need to receive parental affection, or guilt about expressing hostility. Repressing hostility leads to basic anxiety, defined as a feeling of being lonely and helpless in a hostile world.

Four ways to protect oneself against basic anxiety are by gaining affection, being submissive, attaining power, and withdrawing. Any of these protective devices may become a neurotic need or drive. Horney proposed 10 neurotic needs, which she later grouped into three neurotic trends: moving toward people (the compliant personality), moving against people (the aggressive personality), and moving away from people (the detached personality). Compliant types need affection and approval and will do what other people want. Aggressive types are hostile toward others and seek to achieve control and superiority. Detached types keep an emotional distance from others and have a deep need for privacy. Research supports the idea that people respond to anxiety in these ways.

In the "normal" person, the idealized self-image is built on a realistic appraisal of one's abilities and goals. It helps the person achieve self-realization—the maximum development and use of one's potential. The idealized self-image in the neurotic person is based on an unrealistic, misleading appraisal of one's abilities. Research supports the idea that disconnecting from the reality of one's personality and comparing oneself to the "should" too much can have negative effects.

Horney argued against Freud's contention that women have penis envy, poorly developed superegos, and inferior body images. She believed that men envy women because of their capacity for motherhood and, consequently, experience womb envy, which they sublimate through achievement. She rejected the sexual basis for the Oedipus complex, suggesting instead that it involved a conflict between dependence on and hostility toward parents. She argued that women are limited by the tension between career and motherhood and that all people should try to be their best selves, regardless of the gendered norm of those traits. In this way, she was ahead of her time.

Horney's image of human nature is more optimistic than Freud's. She believed that each person is unique and is not doomed to conflict. Although childhood influences are important, later experiences also shape personality. The ultimate goal of life is self-realization, an innate urge to grow, which can be helped or hindered by social forces. According to Horney, we can consciously shape and change our personalities.

Horney's methods of assessment were free association and dream analysis, and her research method was the case study. Some psychologists see value in her concepts of neurotic trends, the need for safety, the role of anxiety, and the idealized self-image. Research supports certain aspects of her theory, namely, the neurotic trends, feminine psychology, the tyranny of the shoulds, and neurotic competitiveness. The theory has been criticized for not being developed as fully as Freud's and for being heavily influenced by middle-class American culture.

Review Questions

1. How do you think Horney's childhood and life experiences influence her theory?
2. Compare and contrast Horney's theory of personality with that of Freud, especially with regard to their view on women.
3. What is the role of hostility and repression in the relationship between children and parents?
4. What is basic anxiety, and how does it originate?
5. Describe the four basic types of behavior people use in childhood to try to protect themselves from basic anxiety.
6. Discuss the three neurotic trends or personality types and the behaviors associated with each one.
7. According to Horney, how does the idealized self-image of the normal, realistic person differ from the idealized self-image of the neurotic person?
8. Explain neurotic competitiveness and how types of competitiveness vary in how positive or negative they are for the self and others.
9. Contrast the tyranny of the shoulds with the process of externalization.
10. How did Horney account for women in earlier times who experienced feelings of inadequacy?
11. In your opinion, what is Horney's major contribution to the study of personality?

Suggested Readings

- Berger, M. M. (Ed.). (1991, September). Special issue commemorating the 50th anniversary of the founding by Karen Horney, M.D. (1885–1952), of the Association for the Advancement of Psychoanalysis; the American Institute for Psychoanalysis; and the *American Journal of Psychoanalysis. American Journal of Psychoanalysis, 51*(3). Includes tributes to and personal recollections of Karen Horney, along with an overview and evaluations of her work.
- Gilman, S. L. (2001). Karen Horney, M.D., 1885–1952. *American Journal of Psychiatry, 158*, 1205. Discusses Horney's life and work and assesses the impact of her ideas on the beginnings of feminist theory.
- Horney, K. (1967). *Feminine psychology.* W.W. Norton. Amalgamation of Horney's writings, including *Womb Envy* and *Flight from Womanhood*.
- Horney, K. (1937). *The neurotic personality of our time*. New York: Norton. Describes the development of conflict and anxiety within the personality and relates neuroses to past experiences and to the sociocultural climate.
- Horney, K. (1980). *The adolescent diaries of Karen Horney*. New York: Basic Books. A publication of diary entries Horney wrote between the ages of 13 and 25; the entries are characterized by intense emotion and intellectual honesty.
- Horney, K. (1987). *Final lectures*. Norton. Contains lectures Horney delivered during the last year of her life. Presents refinements of her views on psychoanalytic techniques, such as free association and dream analysis.
- Mitchell, J. (2014). *Individualism and the moral character: Karen Horney's depth psychology*. Transaction Publishers. An analysis of how Horney's approach to personality differed from Freud's. Includes her views on how people establish their own identities instead of being victims of childhood experiences.
- Paris, B. J. (1994). *Karen Horney: A psychoanalyst's search for self-understanding*. Yale University Press. A study of Horney's life and work, exploring the relationship between her struggle for self-understanding and the evolution of her ideas. Assesses her later work as a contribution to psychology, psychoanalysis, and the study of gender and culture.
- Quinn, S. (1987). *A mind of her own: The life of Karen Horney*. Summit Books. Discusses Horney's life, her work on feminine psychology, and her conflicts with the orthodox Freudian establishment.
- Sayers, J. (1991). *Mothers of psychoanalysis: Helene Deutsch, Karen Horney, Anna Freud, Melanie Klein*. Norton. Describes the post-Freudian modification of psychoanalytic theory from patriarchal to matriarchal. Shows how the experiences of these influential women psychoanalysts changed the focus from sex, repression, and castration anxiety to identification, projection, and separation anxiety.

Part 3

The Life-Span Approach

Most personality theorists devote some attention to the way our personalities develop over time. They differ, however, about the time period during which they believe personality continues to grow and change. For example, Freud wrote that personality evolved only up to the age of 5. Jung, in contrast, argued that middle age was the most important time of change. Adler and Horney agreed that personality may keep changing well beyond childhood.

The life-span approach to understanding personality, represented here by the work of Erik Erikson, focuses on its development over the entire life span. His theory attempts to explain human behavior and growth through eight stages from birth to death. Erikson believed that all aspects of personality could be explained in terms of individual crises or turning points we must face and resolve at each of these stages of development.

Chapter 6

The personality is engaged with the hazards of existence continuously, even as the body's metabolism copes with decay.—Erik Erikson

Erik Erikson: Identity Theory

Learning Objectives

6.1 Compare and contrast Erikson's theory with the psychoanalytic framework, providing three examples of similarities and differences.

6.2 List the eight stages of Erikson's psychosocial development model.

6.3 For each of the eight psychosocial stages, describe the conflict, basic weakness, and basic strength of each of the eight psychosocial stages.

6.4 Outline the psychological and behavioral contributions to and results of generativity.

6.5 Describe the research findings on gender differences in toy preferences.

6.6 Analyze the strengths and weakness of Erikson's assessment methods.

6.7 Summarize Erikson's view of personality in five sentences.

The work of Erik Erikson has had a profound influence on psychoanalysis as well as the general culture. His books were bestsellers, and his picture appeared on the covers of *Newsweek* and the *New York Times Magazine,* unusual recognition for a personality theorist. And he achieved this high level of prominence without ever earning a university degree in any subject.

Trained in the Freudian tradition by Freud's daughter Anna, Erikson developed an approach to personality that broadened the scope of Freud's work while maintaining its core. Although he offered significant innovations, his ties to the Freudian position were strong. "Psychoanalysis is always the starting point," he said (quoted in Keniston, 1983, p. 29). Erikson "publicly defined himself as a loyal Freudian, even as he departed substantially from orthodox psychoanalytic theory" (Anderson & Friedman, 1997, p. 1063).

Erikson extended Freud's theory in three ways:

1. He elaborated on Freud's stages of development, suggesting that personality continues to develop over the entire life span.

2. He placed greater emphasis on the ego than on the id. In Erikson's view, the ego is an independent part of the personality. It is not dependent on or subservient to the id, as Freud had said.
3. He recognized the impact of cultural and historical forces on personality.

He argued that we are not governed entirely by innate biological factors at work in childhood. Although they are important, they do not provide a complete explanation of personality.

The Life of Erikson (1902–1994)

Personal Identity Crises

It is not surprising that the theorist who gave us the concept of the identity crisis experienced several of the same kind of crises of his own, which "he was never able, over his lifetime to resolve" (Wallerstein, 2014, p. 657). Erikson was born in Frankfurt, Germany. His Danish mother, from a wealthy Jewish family, had married several years earlier, but her husband disappeared within hours of the wedding. She became pregnant with another man and was sent to Germany to give birth in order to avoid the social disgrace of having a child out of wedlock at that time in history. Despite his pleading to her for years, she never told her son who his father was.

She remained in Germany after the baby was born and married Dr. Theodore Homburger, the infant's pediatrician. Erik did not know for some years that Homburger was not his biological father and said that he grew up unsure of his name and psychological identity. He kept the surname Homburger until age 37 when he became a U.S. citizen and changed his name to Erik Homburger Erikson.

Another crisis of identity occurred when Erik started school. Despite his Danish parentage, he considered himself German, but his German classmates rejected him because his mother and stepfather were Jewish. His Jewish classmates rejected him because he was tall and blond and had Aryan facial features. He earned average grades but showed some talent for art. After graduating from high school, he used that ability to try to establish an identity.

Dropping Out of Society

Erikson dropped out of conventional society and traveled extensively in Europe, reading, recording his thoughts in a notebook, and observing life around him. He described himself as morbidly sensitive and neurotic, even close to psychotic. Many years later one of his daughters wrote:

> My father suffered terribly from the sense that his real father had abandoned him and had never cared to know him. He struggled with a depressive tendency all his life. His childhood experience of abandonment and rejection had left him plagued with self-doubt. He felt deeply insecure and unsure of his footing. He craved constant support, guidance, and reassurance from others. (Bloland, 2005, pp. 52, 71)

Erikson studied at two art schools and had his work exhibited at an art gallery in Munich, but each time he left formal training to continue his wandering—his search for an identity. Later, when discussing his concept of the identity crisis he wrote, "No doubt, my best friends will insist that I needed to name this crisis and to see it in everybody else in order to really come to terms with it in myself' (Erikson, 1975, pp. 25–26).

As with many personality theorists, we can see a close correspondence between Erikson's life experiences, particularly in childhood and adolescence, and the personality theory he developed as an adult. A biographer noted that what Erikson "saw and felt happening to himself (as with Freud's examination of his own dreams, memories, fantasies) became the 'research' that enabled a flow of ideas, articles, books" (Friedman, 1999, p. 16).

Becoming a Freudian

At the age of 25, Erikson received an offer to teach at a small school in Vienna that had been established for the children of Sigmund Freud's patients and friends. Freud was attracting patients from all over the world. Being wealthy, they moved to Vienna with their families for the duration of their psychoanalysis. Erikson later confessed that he was drawn to Freud in part because of his search for a father. It was then that Erikson's professional career began and that he felt he had finally found an identity.

He trained in psychoanalysis and was analyzed by Anna Freud. The analytic sessions were held almost daily for three years, for a fee of $7 a month. Anna Freud, unlike her father, was interested in the psychoanalysis of children. Her influence, plus Erikson's own classroom teaching experiences, made him aware of the importance of social influences on personality and led him to also focus on child development. After he completed his program of study, he became a member of the Vienna Psychoanalytic Institute.

Three Weddings, One Partner, and a Stable Foundation

In 1929, at a masquerade ball in Vienna, Erikson met Joan Serson, a Canadian-born artist and dancer who had been analyzed by one of Freud's disciples. They fell in love, but when she became pregnant, Erikson refused to marry her. He told her that he was afraid to make a permanent commitment and that his mother and stepfather would not approve of a daughter-in-law who was not Jewish. Only the intercession of friends persuaded him that if he did not marry Joan, he would be repeating the behavior pattern of his biological father, and condemning his child to the stigma of illegitimacy, which Erikson himself felt so keenly.

When he finally decided to marry Joan, he did so three times, in separate Jewish, Protestant, and civil ceremonies. Joan arrived at the synagogue for the Jewish ceremony carrying a bag that reeked of pork and bacon, strongly forbidden foods, while Erik forgot the wedding ring. A biographer remarked that the wedding was both a comedy of errors and a mockery of the strict Jewish customs followed by his mother and stepfather (Friedman, 1999). Joan abandoned her own career to become Erikson's lifelong intellectual partner and editor. She provided a stable social and emotional foundation for his life and helped him develop his approach to personality. Erikson's half-sister commented that "he would have been nothing without Joan" (quoted in Friedman, 1999, p. 86). Erikson agreed.

Coming to America

In 1933, recognizing the growing threat of Nazis, the Eriksons immigrated to Denmark and then to the United States, settling in Boston. Erikson established a private psychoanalytic practice specializing in the treatment of children. He also worked at a guidance center for people with affective and behavioral disorders and served on the staff of Massachusetts General Hospital.

Erikson began graduate work at Harvard, intending to get a PhD in psychology, but he failed his first course and dropped out of school. In 1936, with no academic degree, he was invited to the Institute of Human Relations at Yale, where he taught in the medical school and continued his psychoanalytic work with children.

Erikson and a Yale anthropologist collaborated on a study of the child-rearing practices of South Dakota's Sioux Indians. Working as faculty at a university without an advanced degree was possible at the time of Erikson's burgeoning career, but not today. This research reinforced his belief in the influence of culture on childhood. Erikson continued to expand on his ideas at the Institute of Human Development at the University of California at Berkeley. Unlike many psychoanalysts, Erikson wanted his clinical experience to be as broad as possible, so he sought out patients from diverse cultures and whose psychological well-being varied widely.

Honors and Accolades—but No Identity

In his observations of American Indians in South Dakota and in California, Erikson noted certain psychological symptoms that could not be explained by orthodox Freudian theory. The symptoms appeared to be related to a sense of alienation from cultural traditions and resulted in the lack of a clear self-image or self-identity. This phenomenon, which Erikson initially called identity confusion, was similar to the condition he had observed among psychologically distressed veterans after World War II.

Erikson suggested that those men were not dealing with repressed conflicts but rather from confusion brought about by traumatic war experiences and by being temporarily uprooted from their culture. He had described the veterans' situation as a confusion of identity about who and what they were.

In 1950, Erikson joined the Austen Riggs Center in Stockbridge, Massachusetts, which was a treatment facility for adolescents with emotional dysregulation. Ten years later, he returned to Harvard to teach a graduate seminar and a popular undergraduate course on the human life cycle, retiring in 1970.

At the age of 84, Erikson published a book about old age. Even after a lifetime of accomplishments, honors, and accolades, however, his daughter wrote that he still felt shame: "It was still a source of shame to this celebrated man that he had been an illegitimate child" (Bloland, 2005, p. 51).

Pause for Reflection

How were Erikson's experiences similar or different from the other theorists we've covered so far? How were his experiences similar or different from your own?

Psychosocial Stages of Personality Development

Erikson divided the growth of the personality into eight **psychosocial stages** of development. The first four are similar to Freud's oral, anal, phallic, and latency stages. The major difference between their theories is that Erikson emphasized psychosocial correlates, whereas Freud focused on biological factors.

The Role of Genetics and the Environment

Erikson suggested that the developmental process was governed by what he called the **epigenetic principle of maturation**. By this he meant that inherited forces are the determining characteristics of the developmental stages. The prefix *epi* means "upon"; therefore, development depends on genetic factors.

However, it is the social and environmental forces to which we are exposed that control the ways in which the genetically predetermined stages of development are realized. Thus, our personality development is affected by both biological and social factors. Indeed, in a large study of adolescent twins, researchers found that various dimensions of identity formation (described subsequently) are partially due to genetics (18–45 percent) and mostly due to nonshared environments (55–82 percent) (Markovitch et al., 2017). In another even larger adult twin study that represents U.S. demographic distributions, there were genetic, shared environmental, and nonshared environmental contributions to generativity, or the tendency to support community and younger generations (discussed subsequently) (Faßbender et al., 2019).

Conflicts and Crises

In Erikson's theory, human development involves a series of personal conflicts. The potential for these conflicts exists at birth as innate predispositions, each of which will become prominent at different stages when our environment demands certain adaptations. Each confrontation with our environment is called a **crisis**. The crisis involves a shift in perspective, requiring us to refocus our instinctual energy in accordance with the needs of each stage of the life cycle.

Each developmental stage has its particular crisis or turning point that necessitates some change in our behavior and personality. We may respond to the crisis in one of two ways: a maladaptive (negative) way or an adaptive (positive) way. Only when we have resolved each conflict can the personality continue its normal developmental sequence and acquire the strength to confront the next stage's crisis. If the conflict at any stage remains unresolved, we are less likely to be able to adapt to later problems. A successful outcome is still possible, but it will be more difficult to achieve.

Adaptive Coping

Erikson believed that the ego must incorporate both maladaptive as well as adaptive ways of coping. For example, in infancy, the first stage of psychosocial development, we can respond to the crisis of helplessness and dependency by developing a sense of trust or a sense of mistrust.

Trust, the more adaptive, desirable way of coping, is obviously the healthier option. Yet each of us must also develop some degree of mistrust as a form of protection. If we are totally trusting and gullible, we will be vulnerable to other people's attempts to deceive, mislead, or manipulate us.

Ideally, at every stage of development the ego will consist primarily of the positive or adaptive response but will be balanced by some portion of the negative response. Only then can the crisis be considered satisfactorily resolved. Research provides support for the idea that at certain phases of our lives, we face challenges that can be met with strengths or leave us with weaknesses, with trust, autonomy, and initiative growing in childhood and generativity growing in adulthood (Whitbourne et al., 2009).

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psychosocial stages To Erikson, eight successive stages encompassing development across the life span. At each stage, we cope with a crisis in either an adaptive or a maladaptive way.

epigenetic principle of maturation The idea that human development is governed by a sequence of stages that depend on genetic or hereditary factors.

crisis To Erikson, the turning point faced at each developmental stage.

Table 6.1 Erikson's stages of psychosocial development and basic strengths

Stage	Ages	Adaptive vs. Maladaptive Ways of Coping	Basic Strength
Oral-sensory	Birth–1	Trust vs. mistrust	Hope
Muscular-anal	1–3	Autonomy vs. doubt, shame	Will
Locomotor-genital	3–5	Initiative vs. guilt	Purpose
Latency	6–11	Industriousness vs. inferiority	Competence
Adolescence	12–18	Identity cohesion vs. role confusion	Fidelity
Young adulthood	18–35	Intimacy vs. isolation	Love
Adulthood	35–55	Generativity vs. stagnation	Care
Maturity–old age	55+ years	Ego integrity vs. despair	Wisdom

Basic Strengths

Erikson also proposed that each of the eight psychosocial stages provides an opportunity to develop our **basic strengths**. These strengths, or virtues, emerge once the crisis has been resolved satisfactorily. He suggested that basic strengths are interdependent in that one strength cannot develop until the strength associated with the previous stage has been confirmed (refer to Table 6.1).

Infancy, 0–1 Year Old: Trust Versus Mistrust

Erikson's oral-sensory stage of psychosocial development, paralleling Freud's oral stage, occurs during our first year of life, the time of our greatest helplessness. The infant is totally dependent on the mother or primary caregiver for survival, security, and affection.

During this stage, the mouth is of vital importance. Erikson wrote that the infant "lives through, and loves with, [the] mouth" (1959, p. 57). However, the relationship between the infant and the world is not exclusively biological. It is also social. The baby's interaction with the mother determines whether a response of trust or mistrust for future dealings with the environment will be incorporated into that person's personality.

It's Up to the Mother If the mother responds appropriately to the baby's physical needs and provides ample affection, love, and security, then infants will develop a sense of trust, an attitude that will characterize the growing child's view of themselves and others. In this way, we learn to expect "consistency, continuity, and sameness" from other people and situations in our environment (Erikson, 1950, p. 247). Erikson said that this expectation provides the beginning of our ego identity.

On the other hand, if the mother is rejecting, inattentive, or inconsistent in her behavior, infants may develop an attitude of mistrust and will become suspicious, fearful, and anxious. According to Erikson, mistrust can also occur if the mother does not display an exclusive focus on the child. Erikson argued that a new mother who resumes a job outside the home and leaves her infant in the care of relatives or in a day care center risks promoting mistrust in the child. Think back to Horney's theory; she might argue that this kind of thinking contributes to the tension mothers feel between pursuing motherhood and pursuing a career.

Trust Can Be Lost Later in Life Although the pattern of trust or mistrust as a dimension of personality is set in infancy, the problem may reappear at a later developmental stage. For example, an ideal infant–mother relationship produces a high level of trust, but this can be destroyed if the mother dies or leaves home. If that occurs, mistrust may overtake the personality. Childhood mistrust can be altered later in life through the support of a caring and patient mentor, friend, or partner.

Hope The basic strength of *hope* is associated with the successful resolution of the crisis during the oral-sensory stage. Erikson described this strength as the belief that our desires will be satisfied. Hope

basic strengths To Erikson, character virtues that derive from the satisfactory resolution of the crisis at each developmental stage.

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Erikson suggested that how mothers interact with and respond to their babies would affect the child's tendency to trust or mistrust others.

involves a persistent feeling of confidence, a feeling we will maintain despite temporary setbacks or reverses.

Research on Trust Versus Mistrust Trust is essential for social functioning (e.g., Rotenberg et al., 2023). Parental warmth and attention provide a buffer for the infant's experience of the world. For example, infants whose parents are sensitive to their needs and pain experience much less distress during doctor's appointments, according to a meta-analysis of 29 research studies (Sobol-Kwapińska et al., 2020). Erikson's position that mistrust in infancy may preclude emotional growth over time has received strong research support (see, for example, Jacobson & Wille, 1986; Londerville & Main, 1981; Raby et al., 2015; Sroufe et al., 1983).

Studies of infants aged 12 to 18 months old demonstrated that those who had a strong emotional bond with their mothers (therefore presumed to be high in trust) functioned, when observed three years later, at a higher social and emotional level than infants whose attachment to their mothers was less secure.

Children with a well-developed sense of trust were also more curious, sociable, and popular. They were more likely to be leaders at games and showed greater sensitivity to the needs and feelings of others. Those low in trust were more withdrawn socially and emotionally, reluctant to play with other children, less curious, and less forceful in pursuing goals.

There is also evidence that parenting at this earliest stage can affect trust much later in life. In a study of over 100 Americans from birth to age 32, researchers found that the extent to which mothers were sensitive to their infant's needs predicted that infant's social competence in childhood and adolescence and ability to trust and build relationships with others in adulthood (Raby et al., 2015).

Pause for Reflection

Why do you think infancy is a critical period for building trust? Do you think your levels of trusting others can be tied to this stage or to another?

Toddler, 1–3 Years Old: Autonomy Versus Doubt and Shame

During the muscular-anal stage at the second and third years of life, corresponding to Freud's anal stage, children rapidly develop a variety of physical and mental abilities and are able to do many things for themselves. They learn to communicate more effectively and to walk, climb, push, pull, and hold on to an object or let it go. Children take pride in these skills and usually want to do as much as possible for themselves.

Of all these abilities, Erikson believed the most important involved holding on and letting go. He considered these to be prototypes for reacting to later conflicts in behaviors and attitudes. For example, holding on can be displayed in a loving way or in a hostile way. Letting go can become a vent of destructive rage or a relaxed passivity.

Choice The most important point about this stage is that, for the first time, children are able to exercise some choice, to experience the power of their autonomous will. Although still dependent on their parents, they begin to see themselves as persons in their own right and want to exercise their newfound strengths. The key question becomes how much will society, in the form of parents, allow children to express themselves and do all they are capable of doing?

The Toilet Training Crisis The major crisis between parent and child at this stage typically involves toilet training, seen as the first instance when society attempts to regulate an instinctual need. The child is taught to hold on and let go only at appropriate times and places. Parents may permit the child to proceed with toilet training at their own pace or may become

annoyed. In the latter case, parents may deny the child's free will by forcing the training, showing impatience and anger when the child does not behave correctly. When parents thus frustrate their child's attempt to exercise independence, the child develops feelings of self-doubt and a sense of shame in dealing with others. Although the anal region is the focus of this stage because of the toilet training crisis, you can see that the expression of the conflict is more psychosocial than biological.

Will The basic strength that develops from autonomy is *will*, which involves a determination to exercise freedom of choice and self-restraint in the face of society's demands.

Research on Autonomy and Shame

Research with toddlers and their mothers found that the most autonomous and self-regulating 3-year-olds had very sensitive mothers at age 1 (Ispa et al., 2017). Moreover, the most autonomous and self-regulating toddlers seemed to engage with their mothers in more positive and self-driven ways, including displaying positive emotions and looking at, and trying to interact with, the mother. In a study with individuals who had immigrated from China to the United States, mothers who practiced a "psychological interdependence interaction pattern" engaged in parenting that balanced control, emotional closeness, and child autonomy, which allows children to remain connected to their families while also being able to make their own choices via their will, or be autonomous (Chen et al., 2012). A young person's ability to make choices and act autonomously can affect their enjoyment throughout childhood. For example, in a study of elementary students across the United States and Taiwan, children who made their own choices about what activities to do after school enjoyed those activities more and were less anxious than children who did not make their own choices (Bidjerano & Newman, 2010). If people do not establish autonomy, perhaps because of the social and cultural pressures on them, they are likely to experience shame, even much later in life. In a study of religiously affiliated sexual minority women, individuals' shame was predicted by their psychosocial development, with 64 percent of variance in shame being accounted for by identity/identity confusion, trust/mistrust, and autonomy/shame and doubt (Hallman et al., 2018).

Pause for Reflection

How do you respond when your autonomy is limited? How might that be linked to experiences in early childhood?

Young Childhood, Ages 3–5: Initiative Versus Guilt

The locomotor-genital stage, which occurs between ages 3 and 5, is similar to the phallic stage in Freud's system. Motor and mental abilities are continuing to develop, and children can accomplish more on their own. They express a strong desire to take the initiative in many activities.

The Oedipal Relationship One initiative that may develop is in the form of fantasies, manifested in the desire to possess the parent of the opposite sex and establish a rivalry with the parent of the same sex. How will the parents react to these self-initiated activities and fantasies? If they punish the child and otherwise inhibit these displays of initiative, the child will be more likely to develop persistent guilt feelings that will affect self-directed activities throughout the person's life.

In the Oedipal relationship, the child inevitably fails, but if the parents guide this situation with love and understanding, then the child will be more likely to acquire an awareness of what is permissible behavior and what is not. The child's initiative can be channeled toward realistic and socially sanctioned goals in preparation for the development of adult responsibility and morality. In Freudian terms, we would call this the superego.

Purpose The basic strength called *purpose* arises from initiative. Purpose involves the courage to envision and pursue goals.

Research on Initiative Research that observed conversations between 5-year-olds and their mothers coded how much parents encouraged or discouraged

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Children between the ages of 3 and 5 begin to set their own goals and show initiative.

their children's initiative as part of connectiveness (Clark & Ladd, 2000). This study found that the more connected mothers and children were, the more children were social-emotionally developed, had friendships, and experienced peer acceptance.

Initiative was ranked as one of the most important attributes (along with autonomy, imagination) for young children to have by teachers in the city center of Moscow in Russia (Butovskaya & Demianovitsch, 2002).

Research on Guilt In a longitudinal study of guilt in young children (Kochanska et al., 2002), researchers found that children who tended to be fearful also tended to display feelings of guilt, and children who were more likely to feel guilt were less likely to violate rules. Girls displayed more guilt than boys, which may be a matter of socialization, as Erikson would argue. Most displays of guilt tended to decrease over time. Mothering in more power-assertive ways was associated with less guilt in children.

Notably, guilt and shame are importantly different with different patterns and downstream effects. When someone feels guilt, they feel bad about a specific behavior ("I did *that* wrong"); when someone feels shame, they feel bad about themselves as people ("*I* did that wrong") (Muris & Meesters, 2014). Even though young children cannot yet distinguish them linguistically (Berti et al., 2000; Olthof et al., 2000), they may respond to their norm violating behaviors or perceptions that they have done something wrong with either patterns of guilt (e.g., trying to make amends) or shame (e.g., trying to avoid the person they harmed) (Barrett et al., 1993).

For example, in a longitudinal study, guilt-proneness in childhood was associated with less risky behavior (fewer sexual partners, less illegal drug and alcohol use, less involvement with criminal justice system), and shame-proneness was associated with more risky behaviors (more unprotected sex and illegal drug use) later in life (Stuewig et al., 2015).

Pause for Reflection

Do you think guilt is good or bad for personal and relationship growth?

Latency in Childhood, Ages 6 to 11: Industriousness Versus Inferiority

Erikson's latency stage of psychosocial development, which occurs from ages 6 to 11, corresponds to Freud's latency period. Children begin school and are exposed to new social influences. Ideally, both at home and at school, children learn good work and study habits, which Erikson referred to as industriousness, primarily as a means of getting praise and satisfaction from successfully completing a task.

Developing New Skills The child's growing powers of deductive reasoning and the ability to play by rules lead to the deliberate refinement of the skills displayed in building things. Here Erikson's ideas reflected the gender stereotypes of the period in which he proposed his theory. In his view, boys will build tree houses and model airplanes, whereas girls will cook and sew.

Pause for Reflection

What do you think Karen Horney would say about the new skills Erik Erikson expected girls and boys to master? What do you think?

Whatever the activities associated with this age, however, the children are making serious attempts to complete a task by applying concentrated attention, diligence, and persistence. In Erikson's words, "The basic skills of technology are developed as the child becomes ready to handle the utensils, the tools, and the weapons used by the big people" (1959, p. 83).

The attitudes and behaviors of parents and teachers largely determine how well children perceive themselves to be developing and using their skills. If children are scolded, ridiculed, or rejected, they are likely to develop feelings of inferiority and inadequacy. Praise and reinforcement foster feelings of competence and encourage continued striving.

Competence The basic strength that emerges from industriousness during the latency stage is *competence.* It involves the exertion of skill and intelligence in pursuing and completing tasks.

Research on Industriousness Erikson used play therapy to conduct research on his theory, focusing on what he called **play constructions**. In one study, boys and girls, ages 10 to 12, were asked to construct a scene from an imaginary movie using dolls, toy animals, toy cars, and wooden blocks. Erikson found that the girls

play constructions A personality assessment technique by Erikson for children in which structures assembled from dolls, blocks, and other toys are analyzed.

tended to build static, peaceful scenes that contained low, enclosed structures. Intruders (animal figures or male figures, never female figures) tried to force their way into the interiors. By contrast, the boys focused on exteriors, action, and height. Their creations tended to be action-oriented, with tall towering structures and cars and people in motion (refer to Figure 6.1).

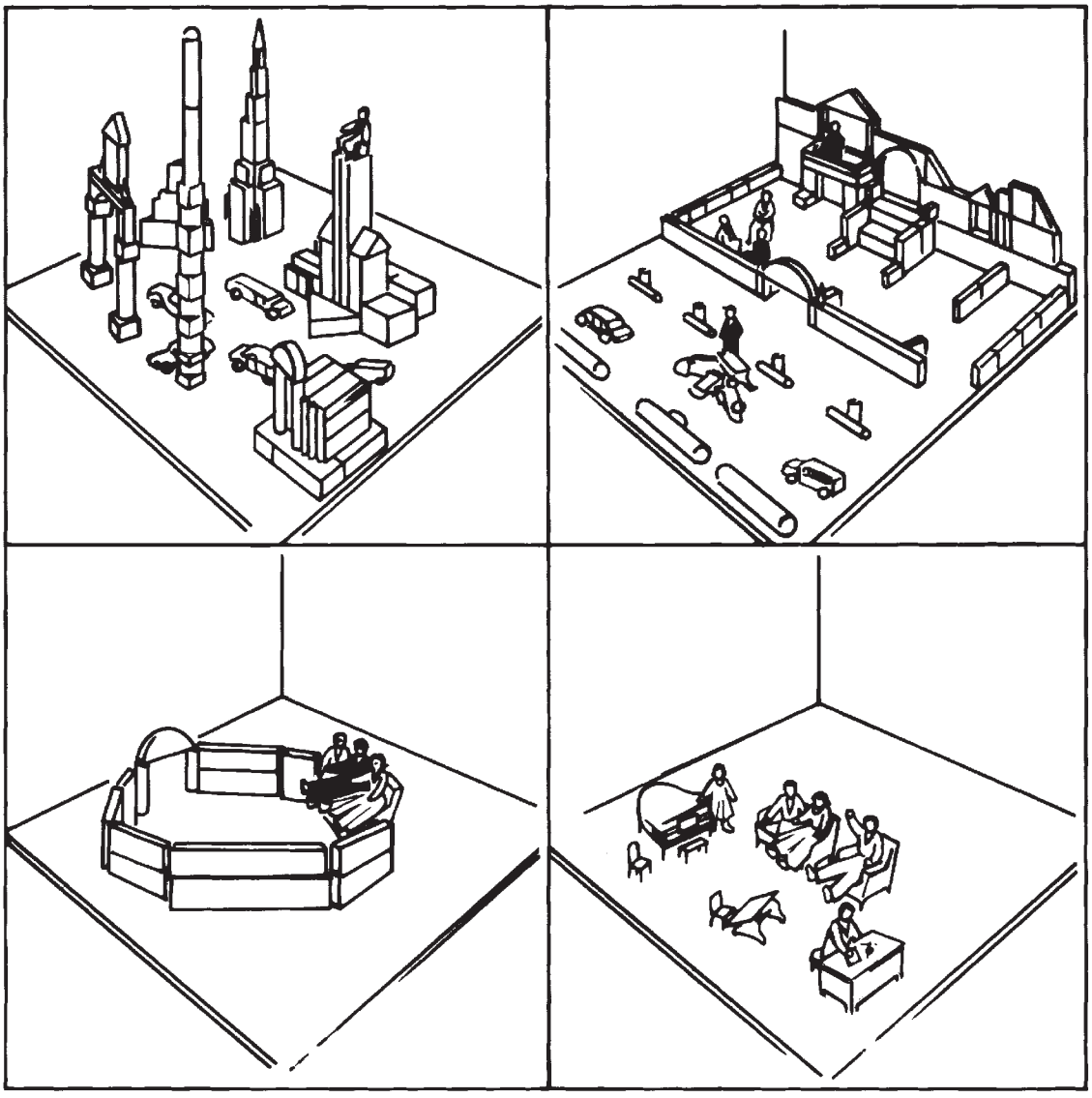
These findings have been replicated more recently in older children, both middle and high school boys tend to build higher towers than girls (Casey et al., 2012).

Trained as an orthodox Freudian, Erikson interpreted these play constructions along standard psychoanalytic lines. He wrote:

> Sexual differences in the organization of a play space seem to parallel the morphology of genital differentiation itself: in the male, an external organ, erectable and intrusive in character . . . in the female, internal organs, with vestibular access, leading to a statically expectant ova. (Erikson, 1968, p. 271)

Figure 6.1

Play constructions created by boys (top) and girls (bottom).



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In other words, based on the determining effect of biological differences, girls would build low enclosures in which people are walled in, and boys would build towers.

Erikson has been criticized for this view, which suggests that girls' and women's psychology can be reduced to their anatomy and that their personalities are determined by the absence of a penis. Erikson admitted that differences in play constructions could also result from societal sex-role training, in which girls are socialized to be less oriented toward action, aggression, and achievement than boys are.

Gender Preferences for Toys Many years after Erikson's research on play constructions, traditional gender stereotyping with regard to toys and play behaviors persists. Most children still prefer gender-based toys. Boys are more likely to play with trucks, soldiers, and guns. Girls are more likely to play with dolls, jewelry, and toy kitchen implements.

A study of 2- to 4-year-olds found that boys played more with a toy train than with a doll, whereas girls tended to play with the doll and not the train (Wong & Hines, 2014). Similar results emerged with college students. Men were attracted to a so-called boy's toy, a model fighter jet plane, but only when it was painted blue; they rejected the object when it was painted pink, a traditional "girl" color (Dinella et al., 2013). This suggests that it's not about the toy itself, but the gender stereotype. A similar kind of gender preference was found with a group of 10- to 11-year-olds who were asked to choose software for computer-based problems. Boys chose the software labeled "Pirates," whereas girls chose the one labeled "Princesses" (Joiner, 1998).

Pause for Reflection

Are there other factors than intrinsic preferences that could be driving the gendered toy effects? What kind of toys do you think parents tend to get for girls? For boys?

The Role of Parents in Determining Gender Preferences for Toys These patterns of toy preferences are still taught and encouraged by some parents, who purchase most of their young children's toys. Parents are more likely to praise children for playing with the gender-stereotype-consistent toy and discourage them from playing with toys stereotyped as appropriate for another gender. The message is learned quickly. One psychologist observed a boy who "had been playing with a race car and its driver when the driver's helmet fell off revealing long blond hair. The driver was a woman. The boy dropped the race car like it was a hot potato" (Martin, 1999, p. 49).

Past research suggests that fathers are more likely to treat boys and girls in a more stereotypical way than mothers do: Fathers tend to encourage and reward passive, compliant behaviors in girls and assertive, aggressive behaviors in boys (Quiery, 1998).

The Final Four Developmental Stages

The outcome of the crisis at each of the first four childhood stages depends on other people. The resolution is a function more of what is done to children than of what they can do for themselves. Although children experience increasing independence from birth to age 11, their development remains mostly under the influence of parents and teachers, who are typically the most significant people in their lives at this time.

In the last four stages of psychosocial development, we have increasing control over our environment. We consciously and deliberately choose our friends, colleges, careers, spouses, and leisure activities. However, these deliberate choices are obviously affected by the personality characteristics that have developed during the stages from birth to adolescence. Whether our ego at that point expresses primarily trust, autonomy, initiative, and industriousness, or mistrust, doubt, guilt, and inferiority, will determine the course of the rest of our lives.

Adolescence, Ages 12–18: Identity Cohesion Versus Role Confusion

Adolescence, between ages 12 and 18, is the stage at which we must meet and resolve the crisis of our basic **ego identity**. This is when we form our self-image, the integration of our ideas about ourselves, about what others think of us, and what we want to be. If this process is resolved satisfactorily, the result is a consistent and congruent picture.

Shaping an identity and accepting it are difficult tasks, often filled with anxiety. Adolescents experiment with different roles and ideologies, trying to determine the most compatible fit. Erikson suggested that adolescence was a hiatus between childhood and adulthood, a necessary psychological moratorium to give the person time and energy to play different roles and live with different self-images.

ego identity The self-image formed during adolescence that integrates our ideas of what we are and what we want to be.

Psychologists tested Erikson's belief that positive outcomes in resolving the identity crisis are related to positive outcomes at prior developmental stages (Waterman et al., 1970). Adolescents who developed trust, autonomy, initiative, and industriousness (adaptive ways of coping) in the first four stages of psychosocial development displayed a high level of identity cohesion rather than role confusion. Adolescents who had not resolved their identity crisis and who experienced role confusion had not developed adaptive ways of coping in the earlier stages.

A Stressful Time to Search for Identity As you may well know, adolescence can be a turbulent and stressful period. Three key elements for this developmental stage have been identified.

- Conflict with parents, characterized by a forceful resistance to adult authority.
- Mood disruption, characterized by a volatile emotional life, mood swings, and episodes of depression.
- Risky behaviors, characterized by reckless, rule-breaking, and antisocial behavior that may harm themselves and others.

A study in which 155 adolescents kept diaries of their daily interactions over a two-week period showed that 31 percent of their interactions involved conflicts with other people. The teenage subjects reported that conflicts with their parents were more important to them, and more emotionally intense, than were conflicts with their peers (Jensen-Campbell & Graziano, 2000).

Studies tracking individuals from childhood to adolescence found that many of those who experienced depression and other emotional problems during the teen years had also suffered some form of psychological distress as children. This suggests that difficulties reported in adolescence do not necessarily arise because of adolescence (Steinberg & Morris, 2001).

The Identity Crisis People who emerge from this stage with a strong sense of self-identity are equipped to face adulthood with certainty and confidence. Those who do not achieve a cohesive identity—who experience what Erikson called an **identity crisis**—will exhibit a confusion of roles. They do not know who or what they are, where they belong, or where they want to go.

They may withdraw from the historical and stereotyped life trajectory (education, job, marriage) as Erikson did for a time or seek a negative identity in unhealthy, self-destructive, or antisocial patterns of behavior. Even a negative identity, as society defines it, is preferable to no identity at all, although it is not as satisfactory as a positive identity.

Erikson noted the strong impact of peer groups on the development of ego identity in adolescence. He noted that excessive association with fanatical groups and cults, or obsessive identification with icons of popular culture, could restrict the developing ego.

Erikson suggested that the identity crisis began around age 12 and was resolved, one way or another, by approximately age 18. However, for some people, the identity crisis may not occur until later (if at all). In one study, up to 30 percent of the people studied were still searching for an identity as late as age 24 (Archer, 1982).

Also, college may delay the resolution of the identity crisis and prolong the period during which young adults tend to experiment with different roles and ideologies (Cote & Levine, 1988). When college students were compared with people of the same age who held full-time jobs, it was found that employed persons had achieved ego identity at an earlier age than students had. The students remained longer in the moratorium status (Adams & Fitch, 1982). Additional research suggests that the construction of a person's identity may even be a continuing process that occurs over the entire life span (McAdams, 2001).

Fidelity The basic strength that should develop during adolescence is *fidelity*, which emerges from a cohesive ego identity. Fidelity encompasses sincerity, genuineness, and a sense of duty in our relationships with other people.

Statuses During Search for Ego Identity An extensive and foundational research program on the adolescent stage of development identified five

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Erikson said that adolescence is the primary time for finding your identity.

identity crisis The failure to achieve ego identity during adolescence.

psychosocial types, or statuses, for that period (Marcia, 1966, 1980). These are identity achievement, moratorium, foreclosure, identity diffusion, and alienated achievement.

Identity Achievement. Identity achievement describes adolescents who are committed to occupational and ideological choices. A study of college students found a positive correlation between achieved identity status and objective measures of commitment (Streitmatter, 1993). These students had developed a strong ego identity.

They were stable, concerned with realistic goals, and able to cope with changing environmental demands. They performed better on difficult tasks than adolescents experiencing role confusion. Adolescents with more stable identities tended to major in more difficult areas in college, and were attracted to courses in engineering and the physical sciences (Marcia & Friedman, 1970).

Teens who reached their identity status earlier in adolescence were found to be more likely to have a stable intimate romantic relationship in their twenties (Beyers & Seiffge-Krenke, 2010). They were also less likely to engage in binge drinking, illegal drug use, and high-risk sexual behaviors than those who had not achieved identity status (Schwartz et al., 2010).

Studies of American, Chinese, and Turkish high school and college students found that the identity achievement status correlated highly with self-esteem, positive forms of coping, psychological well-being, and a stronger sense of self. It represented the most psychologically and socially mature identity status (Cakir, 2014; Ickes et al., 2012; Markstrom & Marshall, 2007; Meuss, 2011; Wang et al., 2010).

In a study with a racially and ethnically diverse sample of 10,000 college students across the United States, researchers found that young people with high identity synthesis and low role confusion had high well-being and low internalizing, externalizing, and health risks (Schwartz et al., 2015).

A large-scale research program including more than 120 studies found that identity achievement status rose over late adolescence and young adulthood, in line with Erikson's theory (Kroger et al., 2010).

There is also evidence that adolescents who thought seriously about what they wanted to do with their lives, and so were more likely to achieve an identity, had parents who provided direction and control in a loving and caring way, in contrast to parents who were either too permissive or too authoritarian (Berzonsky, 2004). This was also found in a study of Iranian college students. Those least likely to reach identity achievement had parents who were either too authoritarian or too permissive in their child-rearing behavior (Mohammadi, 2013). These findings underscore the importance of warmth in childhood to lay a foundation of autonomy and initiative.

Moratorium. Moratorium, the second adolescent status, describes people who are still undergoing their identity crisis. Their occupational and ideological commitments are vague. They hold ambivalent views toward authority figures, alternately rebelling and needing guidance from them. Their behavior ranges from indecisive to active and creative, and they score high in anxiety (Blustein et al., 1989; Lillevoll et al., 2013; Podd et al., 1968). They also tend to daydream, believe in supernatural phenomena, and enjoy behaving childishly (Bilsker & Marcia, 1991). In a longitudinal study of nearly 5,000 first-year Japanese university students, women tended to be categorized as in the moratorium status and deeply explored, worried about, and felt insecure in their identities (Hatano et al., 2022).

Foreclosure. Foreclosure describes adolescents who have not yet experienced an identity crisis but who express commitment to an occupation and an ideology. However, these commitments often have been determined for them by their parents and do not result from the adolescents' deliberate choice. These teens tend to be rigid and authoritarian and have difficulty coping with change (Marcia, 1967). Those in the foreclosure status tend to be achievement-oriented, but they focus their energy toward external rather than internal goals (Stephen et al., 1992).

Identity Diffusion. The identity diffusion status characterizes people who have no occupational or ideological commitments in adolescence and who may not have experienced an identity crisis. Their chosen lifestyle may actively reject any kind of commitments and in the extreme may result in aimless drifting and wandering, as Erikson did in his late teens. These adolescents have distant relationships with their parents, whom they see as indifferent and rejecting (Waterman, 1982).

Studies of adolescents in Greece, Belgium, Poland, and the United States in the identity diffusion status demonstrated that they ranked lower in psychological adjustment and subjective well-being and higher in unstable self-image and interpersonal relationships. They were also more likely to engage in impulsive and self-destructive behavior, to show an excessive need for attention, and to have grandiose fantasies (Crawford et al., 2004; Luyckx et al., 2005; Oleś, 2016; Vleioras & Bosma, 2005).

In that large study of nearly 10,000 college students, those who had diffused status had relatively low well-being with high internalizing, externalizing, and risky behaviors (Schwartz et al., 2015). In that large study of first-year Japanese students, men tended to be categorized as part of diffusion transition and were less deeply exploring, worried about, or insecure about their identities (Hatano, 2022).

Alienated Achievement. The fifth and final status, alienated achievement, describes adolescents who have experienced an identity crisis and have no occupational goal. They may also cling to beliefs that are critical of the social and economic system. Their strong commitment to this rationale precludes any career that would entangle them in the very system they oppose. As students they tend to be cerebral, philosophical, and cynical (Marcia & Friedman, 1970; Orlofsky et al., 1973). There has not been a lot of recent research on alienated achievement status, though.

Achieving an Integrated Ego Identity. Four of these statuses—in this order: identity diffusion, foreclosure, moratorium, and identity achievement—represent increasingly successful resolutions of the identity problem. Erikson predicted that people who have achieved an integrated ego identity will have greater ego strength than those who are farther from resolving their identity dilemma. That prediction was supported by research with college men (Bourne, 1978a, 1978b).

The Effect of Other Activities on Ego Identity

A study of high school students found that those who were more heavily involved in extracurricular and volunteer activities were higher in the ego strength of fidelity than were those not so involved (Markstrom et al., 2005). Similar results were found with physical activity and participation in sports and exercise programs with both Japanese and American students. The more time they devoted to those kinds of activities, the stronger was their sense of ego identity (Fukama & Mizuochi, 2011; Jones et al., 2014).

Online Identity

Online games and, especially, social media offer adolescents a unique, modern opportunity to do precisely what Erikson said was so necessary at that developmental stage: to try different roles to see which offers the best fit.

Participants can play roles as like or unlike their real selves as they choose without revealing their real identity. "You can be whoever you want to be," one writer noted. "You can completely redefine yourself if you want" (Turkle, 1995, p. 184). That is precisely what Erikson urged us to do during adolescence, to experiment with different identities.

In the context of online games, research with players in Germany, average age 25, found that interpersonal attraction among the players increased the longer they played, as did the intensity of their social identification with the virtual community (Utz, 2003). The degree of identification with their virtual world was thought to be as intense and satisfying as identifying with the real world (Calvert et al., 2009).

An online study of *Second Life* users suggested that players may not be creating entirely new "second lives" online as much as they are bringing portions of their own real, offline lives into their online presentations of themselves. In other words, they are not presenting totally fictional or imaginary personas online but projecting at least portions of their real lives into the situation (Linares et al., 2011).

When it comes to social media, adolescents take the opportunity to self-present by posting only flattering photos of themselves, selectively sharing the best experiences from their lives, and being careful not to post content that others will judge (Yau & Reich, 2019). One

Highlights

Research on Childhood and Adolescence

Children with a well-developed *sense of trust* tend to be:

- Well-developed socially and emotionally
- Popular
- High in curiosity
- Sensitive to the needs and feelings of other people

Adolescence includes the following types or *statuses:*

- Identity achievement
- Moratorium
- Foreclosure
- Identity diffusion
- Alienated achievement

Adolescents high in *identity achievement* tend to:

- Have a strong sense of ego identity
- Be concerned with realistic goals
- Score high in self-esteem and well-being
- Establish mature romantic relationships in young adulthood

group of researchers concluded: "Children who create personal home pages have strong feelings of mastery and use personal home pages to express who they are in a way that may be more comfortable than telling people face-to-face" (Schmitt et al., 2008, p. 504). This persona-shaping goes hand in hand with communicating with and to their peers, such that social media use focused on connecting to others can support adolescents' friendships (e.g., Rousseau et al., 2019).

However, there are drawbacks of social media use in adolescents. A study of seventh to ninth graders found that those who had not yet developed a sense of their true selves were prone to greater use of social media than those who had a stronger sense of self and personal identity (Israelashvili et al., 2012). This can lead to the danger that a person could become so absorbed in a virtual identity that it comes to replace the true developing self. Of course, that can also happen in the real world when adopting a different persona.

As research in the United States demonstrates, people with weak ego strength in the form of low self-control are more likely to use social media excessively, in ways that make them feel bad about themselves (e.g., comparing themselves to others, focusing on when they do not get enough positive feedback), and to manage their personas (Maranges et al., 2023). Research in Australia demonstrated that children and adolescents who score high in loneliness and social anxiety were far more likely to communicate online with others about personal and intimate matters than children and adolescents who score lower in loneliness and anxiety (Bonetti et al., 2010). The association between social media use and poor psychological well-being may be bidirectional, meaning that poor mental health may cause social media use, but also, excessive social media use may cause poor mental health, especially for adolescents (Ho et al., 2017; Labrague, 2014).

Diversity, Culture, and Ego Identity Erikson believed that social and historical factors affect the formation of ego identity, which in turn affects the nature of the personality. The women's movement of the 1960s and 1970s provided a real-world laboratory in which to test the effects of those changing social forces. Specifically, psychologists asked whether women then at the adolescent stage of psychosocial development, the time of striving for an ego identity, were more influenced by the women's movement than women who were older at that time. It was assumed that the identity of the older women had already been formed.

Two major studies answered "yes." Both studied women who had graduated from college during the 1940s to the mid-1960s. Data were gathered from interviews, questionnaires, and self-report personality tests. Women attending college when the women's movement began were found to have greater aspirations. They valued their independence more than did the older women and eventually attained higher levels of education, job status, and income. They were more assertive and self-confident in middle age than women who had passed through the adolescent stage before the advent of the women's movement (Duncan & Agronick, 1995; Helson et al., 1995). More recent data from teenagers in the Netherlands suggest that women may now solidify their identities at a younger age than men, though most people have some level of identity the end of the teen years (Klimstra et al., 2010). Similar findings emerge in a large-scale study of adolescents in India: The girls were higher in ego identity than were boys (Janarthanam & Gnanadevan, 2014). Gender is not the only demographic and identity factor that shapes the identity formation process; indeed, in a three-year longitudinal study of diverse (i.e., Black, Dominican, Chinese, and White) early adolescents, exploration for identity predicted commitment to identity, private regard, and public regard, but some patterns differed slightly by racial or ethnic identity (Hughes et al., 2017).

Pause for Reflection

What statuses do you think you experienced as an adolescent?

Young Adulthood, Ages 19–35: Intimacy Versus Isolation

Erikson considered young adulthood to be a longer stage than the previous ones, extending from the end of adolescence to about the age of 35. During this period, we establish our independence from our parents and quasi-parental institutions, such as college, and begin to function more autonomously as mature, responsible adults. We undertake some form of productive work and establish intimate relationships, typically close friendships and sexual unions.

Erikson defined identity consolidation as the process of dealing successfully with the social realities of adult life. This involves making adjustments to the changing demands of our social world. He believed that identity consolidation usually occurs during the 20s, as people assume adult responsibilities of marriage, family, and career. A study of women ages 22 to 60 found a positive relationship between their readiness and willingness to change, and changes in

their identity commitment at different developmental stages. Looking ahead and contemplating life changes were positively linked to the likelihood of exploring a different identity later in life (Anthis & LaVoie, 2006). Similarly, in a longitudinal study of over 1,000 U.S. adults, emerging adults with stronger identity resolution experienced higher intimacy, generativity, and integrity across the rest of their adult lives (Mitchell et al., 2021).

Caring and Commitment In Erikson's view, intimacy was not restricted to sexual relationships but also encompassed feelings of caring and commitment. These emotions could be displayed openly without resorting to self-protective or defensive mechanisms and without fear of losing our sense of self-identity. We can merge our identity with someone else's without submerging or losing it in the process.

People who are unable to establish such intimacies in young adulthood will develop feelings of isolation. They may avoid social contacts, reject other people, and may even become aggressive toward them. They may prefer to be alone because they fear intimacy as a threat to their ego identity.

Love The basic strength that emerges from the intimacy of the young adult years is *love*, which Erikson considered to be the greatest of all human virtues. He described it as a mutual devotion in a shared identity, the fusing of oneself with another person.

Research on Young Adulthood A study of adults ages 18 to 25 in Canada found that the period of emerging adulthood was a time of increased psychological well-being (Galambos et al., 2006). In a study of nearly 200 African American college students, as emerging adulthood went on, individuals were higher in wisdom, and people still in the stage of moratorium, foreclosure, or diffusion were lower in wisdom (Bang, 2015).

Investigating intimacy versus isolation, researchers followed the relationships of over 700 Polish and American people (Adamczyk et al., 2022). They found that when people were open to love and found partners, they felt less lonely, and when they became single, they experienced more loneliness. In a study of Indian adults with diabetes, patients with more love and commitment (i.e., more social interaction, healthier close relationships, and satisfying marriages) scored higher in ego strength (Singh & Singh, 2022). Young adults' positionality in society can also shape individuals' experiences of intimacy versus isolation—for example, young Black American women may experience a unique association between intimacy and satisfaction in their lives (Howard et al., 2020).

Pause for Reflection

If you're currently a young adult, what is your experience of love? How might that change over time? If you've already passed through young adulthood, what was your experience of love, and how did it change over time?

Adulthood and Mid-life, Ages 35–55: Generativity Versus Stagnation

Adulthood, approximately ages 35–55, is a stage of maturity in which we need to be actively involved in teaching and guiding the next generation, according to Erikson. This need extends beyond our immediate family. In Erikson's view, our concern becomes broader and more long-range, involving future generations and the kind of society in which they will live. One need not be a parent in order to be able to display generativity, nor does having children automatically satisfy this urge. Indeed, generative concern predicts acting in ways to benefit future generations and society and satisfies the needs for relatedness and competence, but it may undermine the need for autonomy, as evidenced in a study of older adults from Cameroon, China (Hong Kong), the Czech Republic, and Germany (Hofer et al., 2016).

Erikson believed that all institutions—whether business, government, social service, or academic—provide opportunities for us to express generativity. Thus, in whatever organizations or activities we are involved, we can usually find a way to become a mentor, teacher, or guide to younger people for the betterment of society at large. Such generativity can be expressed at work. Much of people's meaning in life comes from their meaning in work (Allan et al., 2015).

When middle-aged people cannot or will not find an outlet for generativity, they may become overwhelmed by "stagnation, boredom, and interpersonal impoverishment" (Erikson, 1968, p. 138). Erikson's depiction of these emotional difficulties in middle age is similar to Jung's description of the midlife crisis. People experiencing such difficulties in middle age may regress to a stage of pseudo-intimacy, indulging themselves in childlike ways, and cease to live productive lives as they become concerned primarily with their own needs.

Care *Care* is the basic strength that emerges from generativity in adulthood. Erikson defined care as a broad concern for others and believed it was manifested in the need to teach, not only to help others but also to fulfill one's identity.

Research on American women in their 40s found that, as Erikson predicted, generativity was higher during that stage of life than it was when the women were in their 20s (Zucker et al., 2002). In a related study, college-educated women who scored high in generativity at age 43 maintained that level 10 years later. They also demonstrated a higher level of care-giving to their aging parents and reported a higher level of care for their spouses and children than women scoring low in generativity at age 43 (Peterson, 2002). This research and much more support the idea that generativity and care are important during middle adulthood.

Antecedents of Generativity Generativity in middle age appears to be significantly related to having experienced warm, affectionate parenting in childhood (Franz et al., 1991). Research supports the importance of both mothers and fathers to children's emotional well-being. Middle-aged adults who scored high in generativity tended to believe in the goodness and worth of human life and to feel happier and more satisfied with their own life than did people who scored low in generativity (McAdams & de St. Aubin, 1992; Van de Water & McAdams, 1989).

When a group of men and women were asked to describe the major themes of their lives, those who had previously scored high on the Loyola Generativity Scale revealed different issues from those who scored low. Common themes of the high scorers included some event of good fortune in their early lives, sensitivity to the suffering of others, a stable personal belief system, and clear goals for themselves and for society. Low scorers did not record any of these themes (McAdams et al., 1997).

A group of middle-aged adults were asked to write accounts of personally meaningful episodes from their past, including events that were high points, low points, and turning points. Those who scored high in generativity were far more likely to describe scenes in which a negative life experience had been transformed into a positive redemptive experience. Those who scored low in generativity tended to describe the opposite, in which a positive life experience had been transformed into a negative life event (McAdams et al., 2001).

When a group of college students were studied 20 years later and again 30 years later, it was found that most of those who were slower to reach ego identity in their younger years were able to catch up by middle age and reach the stage of generativity (Whitbourne et al., 2009).

Correlates of Generativity Research on the adulthood stage of psychosocial development has shown that generativity in middle age is positively correlated with power and with intimacy motivation (McAdams et al., 1986). Thus, as Erikson's theory predicts, generativity evokes the needs to feel close to others and to feel strong in relation to them. Another study associated generativity with nurturance (Van de Water & McAdams, 1989). All these are necessary characteristics for teaching and mentoring the next generation, which is the adaptive way of coping in midlife according to Erikson.

The Benefits of Generativity People high in generativity have scored higher on extraversion, self-esteem, conscientiousness, altruism, competence, dutifulness, and openness to new experiences than people low in generativity (Cox et al., 2010; Peterson et al., 1997; Van Hiel et al., 2006). Those high in generativity are also more likely to be involved in satisfying social relationships, to feel attached to their community, and to be emotionally stable (McAdams et al., 1998). In addition, those high in generativity are more likely to have successful marriages, greater success at work, and more close friendships. They also display more altruistic behavior than those who score low on generativity (Westermeyer, 2004). A longitudinal study of college-educated women found that those who valued social recognition and achievement had more fully developed identities in their 40s, and were significantly higher in generativity, than those who did not value social recognition and achievement (Helson & Srivastava, 2001).

A strong positive association has also been found between generativity and psychological well-being. This held for people in midlife who did not have children as well as for those who were parents. This relationship between generativity and well-being was highest among people who reported satisfaction and success from their job and career, however, rather than satisfaction and success as a parent (Clark & Arnold, 2008; Rothrauff & Cooney, 2008). Two longitudinal studies of college-educated women from ages 31 to 48 found that those who were high in generativity at midlife scored significantly higher in emotional well-being than those low in generativity (Vandewater et al., 1997). Part of this may be lifestyle: In a study of 300 people in Iran, those higher in generativity and lower in stagnation had a healthier lifestyle (Momeni et al., 2017).

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In mid-life, adults who thrive become concerned with serving their community and younger generations—this is generativity.

Generativity can serve as a buffer for life challenges that may leave one experiencing negative emotions or physical symptoms because of stress. For example, in a longitudinal study of U.S. parents who cared for children with disabilities, mothers high in generativity experienced less negative affect and physical health issues and more positive affect (Homan et al., 2020). In another study, lesbian, gay, and bisexual older adults reflected on generativity in the LGBTQ+ community, which endures prejudice and discrimination; within this sample and community, people were generative by provisioning resources or engaging in a career that supports the community or by creating community gatherings and sharing knowledge with the community, for example (Rosati et al., 2021).

The Challenge of Technology for Generativity Large-scale technological changes may have a negative impact on the attitude of younger generations toward older adults, which may prevent useful mentoring activities from occurring. Research in Hong Kong found a marked decrease in generativity among older people who felt out of touch with the developments in modern technology. They felt obsolete with regard to the use of the internet and social media and so were unable to relate to and mentor younger generations. They came to believe they were not valued or respected, which led to a disengagement from generative goals and behaviors (Cheng, 2009).

Pause for Reflection

How does Erikson's view of midlife personality differ from those of other theorists we've covered? Have you observed adults in your life acting with generativity?

Maturity and Old Age, 55+ Years Old: Ego Integrity Versus Despair

During the final stage of psychosocial development, maturity and old age, we are confronted with a choice between ego integrity and despair. These attitudes govern the way we evaluate our whole life. Our major endeavors are at or nearing completion. We examine and reflect on life, taking its final measure. If we reflect on our past with a sense of fulfillment and satisfaction, believing we have coped with life's victories and failures, then we are said to possess ego integrity.

Simply stated, ego integrity involves accepting one's place and one's past. If we review our life with a sense of frustration, angry about missed opportunities and regretful of mistakes that cannot be rectified, then we will feel despair. We become disgusted with ourselves, contemptuous of others, and bitter over what might have been.

Indeed, in a study of older adults (ages 61 to 92) in Germany, individuals' memories of their lives were perceived as more positive and were associated with more life satisfaction the more they reflected the themes of psychosocial stages: childhood memories had to do with trust, youth with identity, and adulthood with intimacy and generativity (Nusser et al., 2022). Older adults (75–80 years old) who participated in a lifetime longitudinal study experienced less cognitive impairment and less depression to the extent that their development reflected gaining the basic strengths at each stage of life, as evidenced in their narrative responses to interviews in adulthood (Malone et al., 2016).

Erikson's Own Final Stage At 84, Erikson reported the results of a long-term study of 29 people in their 80s on whom psychological data had been collected since 1928. The book, *Vital Involvement in Old Age*, indicates in its title Erikson's prescription for achieving ego integrity (Erikson, Erikson, et al., 1986).

Older people must do more than reflect on the past. They must remain active, vital participants in life, seeking challenge and stimulation from their environment. They must involve themselves in such activities as grandparenting, returning to school, and developing new skills and interests. As an older person himself, Erikson said that generativity (the focus of mature adulthood) was even more important than he had thought when he was first developing his theory. "Much of the despair [of older people] is in fact a continuing sense of stagnation" (quoted in Cheng, 2009, p. 45). Generativity, developed in the seventh stage of life, may be the most important factor contributing to

ego integrity in the eighth and final stage. This idea, that generativity in stage 7 is integral to well-being in stage 8, is well supported by data. A study of men and women in Australia ages 55 to 93 found that continued involvement in family and community activities led to continued feelings of generativity well into old age (Warburton et al., 2006). Furthermore, although all eight stages of identity development are related to each other, generativity had the biggest impact on ego integrity, as evidenced by a study with almost 300 Taiwanese people ages 65 to 90 (Chen et al., 2021).

Wisdom The basic strength associated with this final developmental stage is *wisdom*. Deriving from ego integrity, wisdom is expressed in a detached concern with the whole of life. It is conveyed to succeeding generations in an integration of experience best described by the word *heritage*. In a 60-year longitudinal study, the wisdom of 80-year-old American men was associated with psychological well-being and was predicted by their openness to experience in early adulthood (60 years earlier) and psychosocial growth through the various stages. That psychosocial growth was supported by a warm childhood, competence in adolescence, emotional stability in early adulthood, and generativity in adulthood (Ardelt et al., 2018).

Research on Maturity and Ego Integrity

Erikson believed that people in the maturity and old age stage of psychosocial development spend time recalling and examining their lives, accepting or regretting past choices. A study of older psychologists found that most of their memories were of college and early adult years, the period involving the greatest number of critical decisions that affected the course of their lives (Mackavey et al., 1991). Similarly, when adults in Britain ages 62 to 89 were asked to recall memories from earlier times, the results supported the psychosocial developmental stages. Memories of their first decade of life focused on issues of trust, autonomy, initiative, and industry. Memories of their second decade (ages 11–20) dealt with identity issues, whereas memories from young adulthood centered on intimacy. Thus, recollections of each succeeding period centered on those situations Erikson foresaw as crucial to development in those stages (Conway & Holmes, 2004).

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In old age, individuals can experience ego integrity and show wisdom, or they can experience despair. Developing fully, especially with generativity, in the prior phases is key to well-being.

Other research found that elderly subjects who scored high in ego integrity devoted far more time to reviewing their lives to resolve troubling issues and come to a better understanding of their circumstances than those who scored low in ego integrity (Taft & Nehrke, 1990). A study of people over the age of 65 in Portugal confirmed that reminiscing about their past lives brought on a feeling of ego integrity as well as psychological well-being (Alfonso et al., 2011).

Studies of adults in their 50s and 60s found that, as Erikson predicted, acknowledging regrets and missed opportunities related directly to their degree of life satisfaction and physical health for both men and women (Torges et al., 2008, 2005). Other research on people between the ages of 60 and 69 found an increased awareness of mortality, a downsizing of goals and life activities and, for many, a continuing difficulty with ego integrity (Robinson & Stell, 2014).

A study in Belgium of adults in their 60s and 70s found that the achievement of ego integrity was linked to high feelings of subjective well-being, positive psychological health, a lower fear of death, and less bitterness and resentment (Van Hiel & VanSteenkiste, 2009).

In this final stage of life, people's psychological experience may be much different than that of younger people. Three age groups of men in Canada (ages 19–25, 35–55, and 65–87) were asked to respond to measures of identity, self-worth, and psychological distress. The results confirmed Erikson's theory. The younger men experienced the highest levels of distress, while the older men had the lowest rates of distress. This is in line with Erikson's view that "the older the individual, the better one is able to cope with life's challenges due to exposure and resolution of earlier psychological dilemmas" (Beaumont & Zukanovic, 2005, p. 77). A comparison of the younger and older stages of the life span in a sample of adults ages 17–82 found that older people were far more concerned with generativity and ego integrity, and less concerned with ego identity, than were younger people. These findings

support Erikson's views. The results also found a significant positive correlation between age and subjective well-being; in general, older people were happier than younger people (Sheldon & Kasser, 2001). When younger adults (ages 25–35) were compared with older adults (ages 60–85), there were no significant differences between the groups in reported frequency of life reflections. However, the reasons for reflecting on life events did differ. Younger people engage in reflection to gain self-insight and find solutions to current problems. Older people reflected on their past to evaluate their lives and achieve a sense of ego integrity (Staudinger, 2001a, 2001b). Indeed, when older adults are able to satisfy their psychological needs in retrospecting about their life experiences, they experience higher ego integrity, lower despair, and less anxiety about death (Van der Kaap-Deeder et al., 2020).

Pause for Reflection

Why do you think that older adults have better well-being when they have moved through the strengths and weaknesses of each developmental phase?

Diversity and Identity

Racial, Ethnic, and Cultural Identity

One aspect of ego development not considered by Erikson is the impact of racial, ethnic, and cultural identity and its positive benefits.

Benefits of Racial Identity

Research on this topic consistently shows the importance of developing and maintaining a racial or ethnic identity for members of minoritized groups. Denying one's racial identity can be stressful (see, for example, Franklin-Jackson & Carter, 2007). Many studies of Latino/a, Asian, and Black teenagers in the United States, Hong Kong, and Canada show clearly that a strong ethnic identity is related to psychological well-being, high self-esteem, strong social bonds, satisfaction with life, and good academic motivation (Chae & Foley, 2010; Kiang et al., 2010; Lam & Tam, 2011; Lee & Lee, 2014; Smith & Silva, 2011; Usborne & Taylor, 2010; Whittaker & Neville, 2010; Yap et al., 2011).

Research involving Black adolescents showed clear, consistent, and strong relationships between racial identity and psychological health. Those who scored high on racial identity were also high in subjective well-being, life satisfaction, and self-esteem. They were also less likely to have mental health problems, including anxiety and depression (Constantine et al., 2006; Cross et al., 2012; Pillay, 2005).

A study of Black, Asian, and biracial teens found that self-esteem was highest among Black teens and lowest among Asian teens. The self-esteem of the biracial adolescents was significantly lower than for Black teens and significantly higher than for Asian teens (Bracey et al., 2004). Thus, racial identity appeared to be a stronger and more important factor for self-esteem among Black adolescents than among biracial or Asian adolescents.

Group esteem (that is, how people feel about being members of their racial or ethnic group) has been shown to increase in Black and Latino/a American teenagers during the period of early and middle adolescence. Group esteem among White students remained stable, measuring high at both the beginning and the end of the period studied (French et al., 2006).

Holding multiple identities can be important, too. In a large study of identity in over 3,000 ethnic minority college students (Black, Asian, and Latino/a Americans), researchers found associations among ethnic identity, U.S. identity, and personal identity, which were together associated with high self-esteem (Gonzales-Backen et al., 2015). Another study of Black adolescents found that, in addition to ethnic identity, gender identity also assumed a greater importance as they got older. Those who were high in both racial and gender identity scored high in mental health and adjustment to school (Rogers, 2013).

Students who experienced more racism reported higher stress and lower psychological functioning than those who experienced little or no racism (Bynum et al., 2007). Similarly, in a study of Latino/a adolescents who immigrated from Cuba and Mexico to the United States, those who perceived negative reception were more likely to have identity confusion, which in turn predicted unhealthy and risky attitudes (Grigsby et al., 2018).

Women and Racial Identity

A study of Black and Latina women found that identity confusion (a conflict in identity between one's minority culture and the majority culture) may be associated with to eating disorders. Identification with a North American model of beauty that emphasizes extreme thinness created in some women a tendency to exhibit disorders such as anorexia. The researchers suggested that this condition resulted from attempts to emulate the appearance standards of the ideal woman of the majority White culture (Harris & Kuba, 1997).

Racial Identity and Ego Identity

Studies of Asian American and Latino/a-American adolescents confirm that ethnicity is central to forming an ego identity. A strong ethnic identity was associated with high self-esteem and with better peer and family relations (Phinney & Chavira, 1992). A study of Hispanic American teens found that those who attended predominantly White schools reported significantly higher levels of ethnic identity than those who attended more ethnically balanced schools (Umaña-Taylor, 2004). Other research found that a strong ethnic identity commitment among Latinos/as served as a buffer or protector against stress and also enhanced subjective well-being and academic achievement (Chang & Le, 2010; French & Chavez, 2010; Torres & Ong, 2010).

Young Asian Americans with high ethnic identity showed stronger resistance to drinking alcoholic beverages and smoking marijuana than Asian Americans with a higher degree of assimilation into the majority culture (Suinn, 1999). Similar results were found in young Latino/a adolescents in immigrant families (Schwartz et al., 2008).

In Canada, among adolescents identified as members of the First Nation (Indigenous peoples), those who identified more strongly with their own culture scored higher on measures of identity strength than those who considered themselves bicultural (Gfellner & Armstrong, 2012).

Stages of Developing Racial Identity

One model of racial identity for Black adolescents is the Revised Racial Identity Model proposed by William Cross. He published the 64-item Cross Racial Identity Scale to measure the developmental stages of his model. Research has shown the scale to be a valid test of ethnic identity (Vandiver et al., 2002). Cross posits four stages in the development of a psychologically healthy Black identity (Cokley, 2002): pre-encounter, encounter, immersion-emersion, and internalization.

The *pre-encounter stage* includes three identity clusters. The pre-encounter assimilation identity contains little racial awareness or racial identity. The pre-encounter miseducation identity internalizes negative stereotypes about being Black. The pre-encounter self-hatred identity involves holding highly negative views about Black people, resulting in anti-Black and self-hating attitudes.

In the *encounter stage* the person is subjected to racism or discrimination, which causes a shift in the adolescent's worldview.

The *immersion-emersion stage* proposes two identities. The immersion-emersion intense Black involvement identity celebrates Blackness as good and desirable. The immersion-emersion anti-White identity perceives Whiteness as bad and undesirable.

The *internalization stage* also consists of two identities. One is Black nationalism, which adheres to a pro-Black Afrocentric perspective, whereas the multiculturalist inclusive identity embraces not only a Black identity but also other types of ethnic, racial, and gender identity.

A study of Black men (average age 20) showed that those in the pre-encounter stage of their racial identity reported significantly less self-esteem, greater psychological distress, and lower psychological well-being than those in the internalization stage (Pierre & Mahalik, 2005). And a study of Black college students found that as racial identity proceeded from the earliest through the more mature stages of this model, the level of defense mechanisms changed from the least sophisticated and immature defenses to more mature ones. This is what could be predicted as a person's racial identity becomes more fully developed (Nghe & Mahalik, 2001).

The importance of this kind of minority ego identity development model lies in the recognition of ethnic identity as a vital component of ego identity and in the suggestion that ethnic identity develops over a series of stages, similar to the concept of Erikson's psychosocial stages. As we noted, Erikson did not deal directly with the concept of ethnic identity, but this model adheres to the same developmental pattern he proposed.

LGBTQ+ Identity

Other aspects of ego identity not considered directly by Erikson are sexual and gender identities as well as variation in traits that have been historically stereotyped as masculine or feminine, which may affect overall ego identity and vary as a function of ethnic identity. For example, a study of White, Black, and Hispanic children (average age 11) found that the Black and Hispanic children reported far more pressure for stereotypical gender conformity than did White children (Corby et al., 2007).

Stages of Identity

Researchers have proposed that lesbian, gay, bisexual, and transgender (LGBTQ+) identity develops over a series of stages, similar to the way Erikson explained the development of ego identity or ethnic identity. One model lists four stages in the development of LQTBQ+ identity (called "gender preference" and "queer" in the past) (Frable, 1997).

1. *Sensitization*. This stage, which occurs prior to adolescence, refers to one's initial perception of being different from peers of the same sex.
2. *Identity confusion*. This adolescent stage is marked by the confusing, perhaps frightening, realization that one's psychology is not consistent with cis- or hetero-normative expectations.
3. *Identity assumption*. During this stage the person comes to believe that they are queer and begins to accept the beginnings of a queer identity.
4. *Commitment*. In this stage the person fully accepts their LGTBQ+ identity.

Of course, like all models of identity development, this process varies across people.

Consequences of Queer Identity Given the discrimination they face, in general, individuals with queer identities experience higher levels of stress, depression, feelings of failure and guilt, and physical and mental health problems, including suicide (Blosnich et al., 2013; Budge et al., 2013; Glicksman, 2013; Liu et al., 2005).

They are also subject to bullying, harassment, and discrimination, particularly in school, which can affect emotional well-being as well as school grades. However, seeing other students intervene to stop such harassment can soften the impact and encourage other students to also intervene. Having strong social support from family and friends can greatly reduce the effects of harassment (Wernick et al., 2014).

Coming out, or identifying themselves publicly, and expressing pride in their identity with no desire to alter or conceal it results in higher scores on measures of mental and emotional well-being (Bockting, 2014). Queer people who come out tend to experience higher self-esteem and lower levels of depression than those who have not shared their identity (Frable, 1997; Kosciw et al., 2014).

Pause for Reflection

How has your overall identity been shaped by your various identities?

basic weaknesses Motivating characteristics that derive from the unsatisfactory resolution of developmental crises.

maldevelopment A condition that occurs when the ego consists solely of a single way of coping with conflict.

Basic Weaknesses

Similar to the way basic strengths arise at each stage of psychosocial development, so may **basic weaknesses**. We discussed previously that the adaptive and maladaptive ways of coping with the crisis at each stage of life are incorporated into the ego identity in a kind of creative balance. Although the ego should consist primarily of the adaptive attitude, it will also contain a share of the negative attitude.

Maladaptive and Malignant Conditions

In an unbalanced development, the ego consists solely of one attitude, either the adaptive or the maladaptive one. Erikson labeled this condition **maldevelopment**. When only the positive, adaptive tendency is present in the ego, the condition is said to be "maladaptive." When only the negative tendency is present, the condition is called "malignant." Erikson thought that maladaptions can lead to neuroses; malignancies can lead to psychoses.

Researchers studied identity formation and eating disorders, which could be thought of as an indicator of maldevelopment, in adolescents in Belgium (Flanders, specifically). They found that young people with higher identity confusion and lower identity synthesis were more vulnerable to body dissatisfaction and bulimia (Verschueren et al., 2018). A study of nearly 10,000 college students found that when individuals' identities were not synthesized and they were stuck in an identity search status, they experienced more internalizing and externalizing symptoms and risky behavior (Schwartz et al., 2015).

Erikson believed that both conditions could be corrected through psychotherapy. Maladaptions, which are less severe, can also be relieved through a process of readaptation, aided by environmental changes, supportive social relationships, or successful adaptation at a later developmental stage. Table 6.2 lists the maldevelopmental characteristics for each of the eight stages.

Questions About Human Nature

A personality theorist who delineates basic human strengths presents an optimistic view of human nature. Erikson believed that although not everyone is successful in attaining hope, purpose, wisdom, and the other virtues, we all have the potential to do so. Nothing in our nature prevents it. Nor must we inevitably suffer conflict, anxiety, and neurosis because of instinctual

Table 6.2 Erikson's maldevelopmental tendencies

Stage	Ways of Coping	Maldevelopment
Oral-sensory	Trust	Sensory maladjustment
	Mistrust	Withdrawal
Muscular-anal	Autonomy	Shameless willfulness
	Doubt, shame	Compulsion
Locomotor-genital	Initiative	Ruthlessness
	Guilt	Inhibition
Latency	Industriousness	Narrow virtuosity
	Inferiority	Inertia
Adolescence	Identity cohesion	Fanaticism
	Role confusion	Repudiation
Young adulthood	Intimacy	Promiscuity
	Isolation	Exclusivity
Adulthood	Generativity	Overextension
	Stagnation	Rejectivity
Maturity and old age	Ego integrity	Presumption
	Despair	Disdain

Source: Adapted from *Vital Involvement in Old Age*, by Erik H. Erikson, Joan M. Erikson, and Helen Q. Kivnick by permission of W. W. Norton & Company, Inc. Copyright © 1986 by Joan M. Erikson, Erik H. Erikson, and Helen Kivnick.

biological forces—our personalities are influenced by both biology and the environment.

Erikson's theory allows for optimism because each stage of psychosocial growth, although centered on a crisis, offers the possibility of a positive outcome. We are capable of resolving each situation in a way that is both adaptive and strengthening. Even if we fail at one stage and develop a maladaptive response or a basic weakness, there is hope for change at a later stage.

Erikson believed that we have the potential to consciously direct and shape our growth throughout our lives. We are not exclusively products of childhood experiences. Although we have little control over life during the first four developmental stages, we gain increasing independence and the ability to choose ways of responding to crises and society's demands. Childhood influences are important, but events at later stages can counteract unfortunate early experiences.

Erikson's theory is only partially deterministic. During the first four stages, the experiences to which we are exposed through parents, teachers, peer groups, and various opportunities are largely beyond our control. We have more chance to exercise free will during the last four stages, although the personality, attitudes, and strengths we have formed during the earlier stages will affect our choices.

In general, Erikson believed that personality is affected more by learning and experience than by heredity. Psychosocial experiences, not instinctual biological forces, are the greater determinant. Our ultimate, overriding goal is to develop a positive ego identity that incorporates all the basic strengths.

Assessment in Erikson's Theory

Erikson agreed with certain of Freud's theoretical formulations, but he differed from Freud in his methods of assessing personality. Erikson questioned the usefulness and even the safety of some Freudian techniques, beginning with the psychoanalytic couch.

To Erikson, asking patients to lie on a couch could lead to sadistic exploitation, creating an illusion of objectivity, overemphasizing unconscious material, and engendering impersonality and aloofness on the part of the therapist. To promote a more personal relationship between therapist and patient and to ensure that they viewed each other as equals, Erikson preferred that patients and therapists face one another while seated in comfortable chairs.

In dealing with his patients, Erikson relied less on formal assessment techniques than Freud. Erikson occasionally used free association but rarely attempted to analyze dreams, a technique he called wasteful

and harmful. He believed that assessment techniques should be selected and modified to fit the unique requirements of the individual patient.

Erikson's primary research method was the case study. By now you are familiar with the weaknesses of this method—the difficulty of replicating and verifying case material—but you also know that much useful information can be obtained through this technique. Erikson argued that case histories yield many insights into personality development and can help resolve a patient's problems. In developing his personality theory, Erikson used data obtained primarily from play therapy, anthropological studies, and psychohistorical analysis.

Play Therapy

For work with children and adolescents, Erikson chose play therapy. He provided a variety of toys and observed how children interacted with them. The form and intensity of play revealed aspects of personality that might not be manifested verbally because of a child's limited vocabulary or ability to express themselves.

Psychohistorical Analysis

Erikson's most unusual assessment technique is **psychohistorical analysis**. These analyses are essentially biographical studies. Erikson used the framework of his life-span theory of personality to describe the crises and the ways of coping of significant political, religious, and literary figures, such as Gandhi, Martin Luther, and George Bernard Shaw.

Erikson's psychohistories typically focus on a significant crisis, an episode that represents a major life theme uniting past, present, and future activities. Using what he called "disciplined subjectivity," Erikson adopted the subject's viewpoint as his own to assess life events through that person's eyes.

Self-Report Measures

Although Erikson did not use standardized psychological measures for personality assessment, several instruments were developed later based on his theory. In the research discussed throughout this chapter, these measures were employed to assess ego identity strength and its related components. The Ego-Identity Scale is designed to measure the development of ego identity during adolescence (Dignan, 1965). That measure has also been employed in work with adults. In research examining the impact of horticultural therapy, women experienced increases in self-identity and decreases in depression and anxiety (Kim & Park, 2018). The Ego Identity Process Questionnaire, also for adolescents, contains 32 items to measure the dimensions of exploration and commitment (Balistreri et al., 1995). For example, one study explored associations among ego identity, decision-making style, and attachment in adolescents in Italy and Spain (Pellerone et al., 2017). The Loyola Generativity Scale (refer to Table 6.3) is a 20-item self-report inventory to measure the level of generativity or stagnation in adulthood (McAdams & de St. Aubin, 1992). Research with this scale has confirmed that older adults who experience more generativity also experience more well-being (Lodi-Smith et al., 2021).

Psychohistorical analysis The application of Erikson's life-span theory, along with psychoanalytic principles, to the study of historical figures.

Table 6.3 Examples of items from a scale to measure generativity

Do these apply to any middle-aged people you know?

1. I try to pass along to others the knowledge I have gained through my experiences.
2. I do not believe that other people need me.
3. I believe I have made a difference in the lives of other people.
4. Other people say I am a productive person.
5. I believe I have done nothing that will survive after I die.
6. People come to me for advice.
7. I believe that society cannot be responsible for providing sustenance and shelter for all homeless people.
8. I have important skills that I try to teach others.
9. I do not like to do volunteer work for charities.
10. Throughout my life I have made and kept many commitments to people, groups, and activities.

Source: Adapted from McAdams, D. P., & de St. Aubin, E. (1992). A theory of generativity and its assessment through self-report, behavioral acts, and narrative themes in autobiography. *Journal of Personality and Social Psychology, 62,* 1003–1015.

Reflections on Erikson's Theory

Contributions and Criticisms

Erikson's substantial contributions to psychology include the recognition that personality continues to develop throughout the life span, the concept of the identity crisis in adolescence, and the incorporation in his theory

of the impact of cultural, social, and historical forces. However, his system does not lack critics. Some point to ambiguous terms and concepts, conclusions drawn in the absence of supporting data, and an overall lack of precision (Rosenthal et al., 1981; Waterman, 1982).

Erikson agreed that these charges were valid and blamed them on his artistic temperament and lack of formal training in science. He wrote, "I came to psychology from art, which may explain, if not justify, the fact that at times the reader will find me painting contexts and backgrounds where he would rather have me point to facts and concepts" (Erikson, 1950, p. 13).

A more specific criticism relates to the incomplete description of the developmental stage of maturity, which Erikson attempted to correct in his 1986 book, *Vital Involvement in Old Age* (Erikson et al., 1986). Also, some psychologists question whether personality development after age 55 is likely to be as positive as Erikson suggested with his concept of ego integrity. For many people, this stage of life is characterized by pain, loss, and depression, even for people who develop the basic strength of wisdom.

Erikson's position on sex and gender differences, as revealed in his interpretation of the play-constructions research, has also come under attack. What he saw as biologically based differences in personality for boys and girls, emerging from the presence or absence of a penis, could as well be cultural differences or the result of gender stereotypes and socialization. Erikson later admitted these possibilities.

Some critics charge that Erikson's personality theory does not apply to people who are not middle or upper class, who cannot afford a moratorium in adolescence to explore different roles and develop an ego identity. This stage may be a luxury available only to those with the means to attend college or take time out to travel, as Erikson did for seven years trying to find himself (Slugoski & Ginsburg, 1989).

Erikson recognized that there are many ways of describing personality development and that no single view was adequate. His influence grew through his books and the work of succeeding generations of psychologists, psychiatrists, teachers, and counselors who found in his ideas useful ways to describe personality development from infancy through old age.

Recognition and Influence

Erikson's ideas have been recognized in both professional and popular circles. *Time* magazine called him the "most influential living psychoanalyst" in 1975, and *Psychology Today* described him as "an authentic intellectual hero" (Hall, 1983, p. 22). His concepts are useful in education, social work, vocational and marriage counseling, and clinical practice with children and adolescents. His work "continues to prove meaningful for contemporary psychology and social thought" (Clark, 2010, p. 59). The Erikson Institute for Early Childhood Education was established for graduate training in 1966 at Chicago's Loyola University.

The field of life-span developmental psychology, which has seen a massive increase in research and theory in recent years, owes much of its spark to Erikson's approach, as does the current interest in developmental problems of middle and old age. In addition, Erikson's method of play therapy has become one diagnostic and therapeutic tool for work with children, especially when it is difficult for them to verbalize their thoughts and feelings because of their language limitations or trauma.

Pause for Reflection

Are there other aspects of Erikson's theory that you think should receive more criticism or more praise?

DEI Spotlight

Erikson's Theory and Diversity, Equity, and Inclusion

Erikson's theory focuses on people's identity development and the challenges across psychosocial lifetime stages that can be overcome with basic strengths or leave one with basic weakness, which affect later development. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individual. Here we focus on the analysis of a remarkable man called "Ben" (pseudonym for privacy) using the framework of Erikson's psychosocial developmental theory by Cadeyrn J. Gaskin and colleagues (2010). By the age of 30, Ben had received many medals for swimming and was placed within the top 50 in the world,

DEI Spotlight, continued

Erikson's Theory and Diversity, Equity, and Inclusion

overcoming challenges he faced in having cerebral palsy. In his younger years, students and teachers treated Ben differently because of his physical disability, and he had quite negative experiences engaging in physical activities. The analysts sum this up:

> Through his involvement in sport and physical activity as an adult, Ben seemed to be addressing the challenges of the Eriksonian stages of latency and adolescence. Ben's early struggles to show competence alongside able-bodied people and his reactions to these experiences are reflective of the issues discussed in psychotherapy with people who have cerebral palsy, such as anger (Blotzer, 1995), depression (Feuerstein, 1995; Lantican et al., 1994), and suicide attempts (Jureidini, 1988). In contrast to many of his experiences throughout his early life (pre-23 years), in which he struggled to show competence, swimming was a task at which Ben could show industry. For Ben, sport and physical activity was a way in which he could meet some of the challenges of the latency period. (p. 204)

His analysts believe that his identity as a disabled person created conflict since that identity was the source of discrimination and limitation, and this kept him in the latency period, before his identity solidified. Seeing the Paralympics was a turning point, when he saw that his identity as a person with a disability did not mean he could not identify as an athlete, as a part of group that provided support and social connection:

> Playing sport, then, also presented the opportunity for social connectedness. Ben's identification with sports people grew stronger when, in 1992, he saw the Paralympics, for the first time, on television. This event made him aware that people with disabilities could be involved in sport. (p. 200)

Ben joined a gym, systematically worked out and lifted weights, and became stronger, then joined a swimming group and began training.

Alex Pantling/Getty Images

Paralympic swimming gave "Ben" a supportive environment in which to more fully form this identity. This photo shows some current Paralympic medalists.

He put himself out there and received opportunities. Soon, Ben went to Sydney, Australia, to see and work with Olympians, meeting paralympic athletes who further inspired him. Swimming gave him the opportunity to move beyond his identity confusion and into identity cohesion:

> His decisions to be involved with sport (swimming, in particular) seemed to have stemmed from a fixation with childhood traumas (e.g., attempting to swim, social isolation from classmates). . . . (p. 201)

> Apart from the competence that Ben demonstrated through swimming, he benefited from the friendliness that other swimmers, officials, and supporters showed towards him at the swimming competition, and from seeing the confidence that other swimmers with disabilities exuded. Ben felt at ease around other people with disabilities. . . . Being a person with a disability seemed to be an important part of his identity. In contrast to the rather limited view of what people with disabilities can achieve that various people in authority (e.g., potential employers, teachers) seemed to have projected onto him, Ben was coming into contact with many successful people

> with disabilities who were acting as positive role models for him. (p. 202)

By understanding the challenges, basic weakness, and basic strengths of Erikson's psychosocial phases of life, these analysts were able to identify when and where Ben was stuck but ultimately succeeded. They were able to reflect back to him his identity as a person with a disability, as a swimmer, and as part of a supportive community.

Family and Society. There is a racial achievement gap in America, with Black and brown students scoring less high than White students. This is not a matter of intelligence; this is a matter of how society treats and what they expect of Black and Latino/a children, with which their families have to contend. This issue has been analyzed through the lens of Erikson's fourth stage of psychosocial development: industry versus inferiority in childhood (Earp, 2012). The homegrown identities of minoritized students come into conflict with the identities that educators and the educational institutions, perhaps unconsciously, reflect onto them:

> But schools—and many teachers—don't make it easy. . . . There is of course no rulebook or explicit "how to" guide given to black children as a school-culture primer, saying, in effect, these are the ways of talking, listening, walking, dressing, writing, expressing, etc., in which you are expected to be fluent—or else you will be pegged as disruptive, rebellious, learning-disabled, remedial, or otherwise underachieving in this environment. (p. 11)

Accordingly, minoritized children may be limited in their ability to develop their "academically industrious self-concept," which is essential for motivation and perseverance in the scholastic context. When children's identities do not include industriousness within a context, they may withdrawal or avoid. Reflecting on how Erikson talked about identity confusion and coping, how can the students cope with this?

> Faced with a choice between academic failure on the one hand and alienation from their home identity on the other, these students pay an enormous psychological cost: they attempt to assimilate in order to succeed. (pp. 13)

Parents and teachers can and should support the intertwining of students' racial and ethnic as well as academic identities. For example:

> A teacher is a paradigm "significant other" in a young student's life. If she is to encourage academic industry in accordance with the Eriksonian model under consideration, she must therefore take care to create in her classroom (as well as personally embody) a positive social mirror for her students—for *all* of her students. This must be a mirror whose reflection says: you are bright, talented, academically competent human beings. . . . But at the same time, if the whole-school environment is overpoweringly oriented to reflect back the codes of the dominant culture, a black student who is untutored in those codes, and whose burgeoning personal identity is interwoven with a non-dominant minority culture, is apt to be getting a very different message. The task of the teacher, then, is to help resolve this dissonance in her minority students during a crucial stage of their identity-development in a manner which avoids the extremes of assimilation (trading cultural identity for codes) and adversarialism (rejecting codes for cultural identity). Enter transcultural pedagogy. (pp. 18–19)

In this way, Erikson's psychosocial developmental theory, and specifically the focus of identity and industriousness in childhood, allows us to zoom in on one important contributor to inequity in scholastic achievement, which can be addressed by teachers, families, and society more broadly.

Chapter Summary

Erikson experienced several personal identity crises and developed a personality theory in which the search for identity plays a major role. He built on Freud's theory by elaborating on the developmental stages, emphasizing the ego over the id, and recognizing the impact on personality of culture, society, and history.

The growth of personality is divided into eight stages. A conflict at each stage confronts the person with adaptive and maladaptive ways of coping. Development is governed by the epigenetic principle; each stage depends on genetic forces, but the environment helps determine whether they are realized.

The oral-sensory stage in infancy (birth to age 1) can result in trust or mistrust. The muscular-anal stage in toddlerhood (ages 1–3) leads to an autonomous will or to self-doubt. The locomotor-genital stage in young childhood (3–5) develops initiative or guilt. The latency stage in childhood (6–11) results in industriousness or inferiority.

Adolescence (12–18) is the stage in which the ego identity is formed (the time of the identity crisis), leading to identity cohesion or role confusion. Young adulthood (18–35) results in intimacy or isolation. Adulthood (35–55) leads to generativity or stagnation. Maturity and old age (over 55) are expressed in ego integrity or despair.

Each stage allows for the development of basic strengths that emerge from the adaptive ways of coping with conflicts. The basic strengths, in order of life stage, are hope, will, purpose, competence, fidelity, love, care, and wisdom. Maldevelopment can occur if the ego consists solely of either the adaptive or the maladaptive tendency.

Erikson presented a flattering, optimistic image of human nature. We have the ability to achieve basic strengths, to resolve each conflict in a positive way, and to consciously direct our growth. We are not victims of biological forces or childhood experiences and are influenced more by learning and social interactions than by heredity.

Erikson's assessment methods were play therapy, anthropological studies, and psychohistorical analysis. His research relied on case studies. There is considerable research support for the stages of psychosocial development and for the concept of ego identity. However, the identity crisis may occur later than Erikson believed, and attending college may delay resolution of the crisis.

Other research confirms the importance of developing a sense of trust early in life and the benefits of generativity in middle age. Among minority group members, the formation of ethnic identity in adolescence may affect the development of ego identity and influence subsequent behavior.

The Cross Racial Identity Model describes four stages in the development of a psychologically healthy adolescent Black identity. Erikson's theory has also been adapted to describe the experience of developing an LGBTQ+ identity.

Criticisms of Erikson's theory focus on ambiguous terminology, incomplete descriptions of the psychosocial stages, and poorly supported claims of male–female personality differences based on biological factors. Some research has supported the usefulness of Erikson's theories in describing identity and personality development across the life span.

Review Questions

1. What identity crises did Erikson experience in his childhood and adolescence? How were they reflected in his theory?
2. In what ways does Erikson's theory differ from Freud's?
3. What are the eight stages of Erikson's psychosocial development model?
4. For each of the eight psychosocial stages, describe the conflict, basic weakness, and basic strength.
5. Summarize the research findings on gender differences in toy preference and construction in 4–6 sentences.
6. Compare and contrast the five identity statuses during adolescence, when people experience an identity crisis.
7. Describe identity cohesion and role confusion as adaptive versus maladaptive ways of coping during adolescence.
8. How can generativity occur? How are generativity and well-being linked, according to research?
9. How can an individual reach ego integrity rather than despair in maturity and old age?
10. What is the major difference between the first four developmental stages and the last four developmental stages?
11. What are the strengths and weaknesses of the methods of assessment Erikson used in developing his theory?
12. How have psychosocial stages of identity development been applied to understand a diversity of identities?
13. What is your opinion of Erikson's theory relative to the others you have studied so far in this course?

Suggested Readings

- Erikson, E. H. (1950). *Childhood and society.* Norton. A collection of essays covering child-rearing practices, family life, and social and cultural structures, illustrating their relationship to personality development. The book was an instant success with scholars and the general public.
- Erikson, E. H. (1968). *Identity: Youth and crisis.* Norton. Erikson's classic work on the identity crisis and ways of coping with conflict at this stage of development.
- Erikson, E. H. (1987). *A way of looking at things: Selected papers from 1930 to 1980.* Norton. A collection of Erikson's writings on children's play constructions, adult dreams, cross-cultural research, and development over the life cycle. Edited by Stephen Schlein.
- Erikson, E. H., Erikson, J. M., & Kivnick, H. Q. (1986). *Vital involvement in old age.* Norton. A sensitive psychosocial analysis of the need for stimulation and challenge in old age and a personal perspective on Erikson as he approached the age of 90.
- Evans, R. I. (1967). *Dialogue with Erik Erikson.* Harper & Row. Conversations with Erikson about his life and work.
- Friedman, L. J. (1999). *Identity's architect: A biography of Erik H. Erikson*. Simon & Schuster. A sympathetic treatment showing how Erikson's ideas of the identity crisis and the stages of the life cycle grew out of his own complicated life.
- Josselson, R. (1996). *Revising herself: The story of women's identity from college to midlife.* Oxford University Press. In an outgrowth of Erikson's theory, this longitudinal account compiled from interviews traces the cultural changes in women's roles and identities in the last third of the 20th century.

Part 4

The Trait Approach

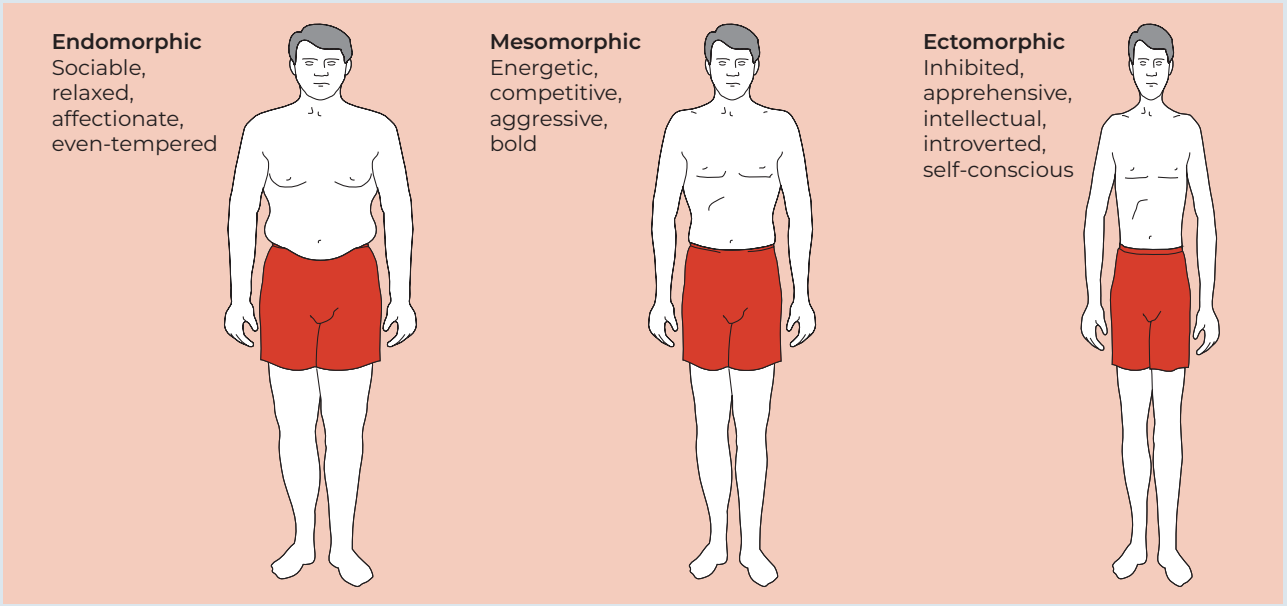
A trait is a distinguishing personal characteristic or quality. In our daily lives, we often use trait names to describe the personalities of people we know. We tend to select an outstanding characteristic or feature to summarize what we think a particular person is like. We may say, “Alex is very self-assured,” or “David is so competitive,” or “Jamie is really compulsive.”

Characterizing people by traits is easy and has a commonsense appeal to it, which may explain why the trait approach to personality has been popular for so long. Trait classifications date from the time of the Greek physician Hippocrates (460–377 BC), more than 2,000 years before the theories described in this book. Hippocrates distinguished four types of people: happy, unhappy, temperamental, and apathetic. The causes of these different types were thought to be internal bodily fluids, or “humors.” He believed that these personality traits were constitutionally based, determined by biological functioning rather than by experience or learning.

In the 1940s, American physician William Sheldon (1899–1977) offered a personality typology based on body build (refer to Figure 7.1). He proposed three body types, each associated with a different temperament (Sheldon, 1942). Like the approach taken by Hippocrates, Sheldon’s work considered personality traits or characteristics to be largely fixed, that is, constant and unvarying regardless of the situations in which we find ourselves. Of course, neither of these systems are supported by research.

Figure 7.1

The body types and personality characteristics proposed by Sheldon have not been supported by research, but his work provides another attempt to classify personality according to traits.



The trait approach to personality begun by Gordon Allport decades ago has become central to the study of personality today—although the contention that personality is completely dictated by genetics is not universal—as we shall see in this and the next chapter.

Chapter 7

As the individual matures, the bond with the past is broken. —Gordon Allport

Gordon Allport: Motivation and Personality

Learning Objectives

7.1 Compare and contrast Allport's theory with that of Erikson and those of psychoanalysts, providing three examples of similarities and differences.

7.2 Explain Allport's definition of personality.

7.3 Outline differences among cardinal traits, central traits, and secondary traits.

7.4 List and define Allport's seven developmental stages.

7.5 Describe the mature person according to Allport's theory.

7.6 Identify five primary findings of research on expressive behavior.

7.7 Summarize Allport's theory of personality in five sentences.

Allport Brings Personality into the Science of Psychology

During a career that spanned more than four decades, American psychologist Gordon Allport made personality an academically respectable topic. Psychoanalysis and the personality theories that derived from psychoanalysis that we have discussed so far were not considered part of mainstream scientific psychology.

The formal and systematic study of personality was not recognized by the psychology establishment until Allport published *Personality: A Psychological Interpretation* in 1937. The book was an immediate success and became a classic in the study of personality. Thus, Allport served two purposes: He helped bring personality into the mainstream, and he formulated a theory of personality development in which traits play a prominent role.

Allport Challenges Freud

Allport challenged Freud's psychoanalysis on several points. First, Allport did not accept the notion that unconscious forces dominate the personality of normal mature adults. He argued that emotionally healthy people function rationally and consciously, aware and in control of many of the forces that motivate them.

According to Allport, the unconscious is important only in the behavior of people dealing with neurosis.

Second, with regard to historical determinism—the importance of the past in determining the present—Allport said that we are not prisoners of childhood conflicts and past experiences, as Freud believed. Instead, we are guided more by the present and by our view of the future. Allport wrote that people are "busy leading their lives into the future, whereas psychology, for the most part, is busy tracing them into the past" (Allport, 1955, p. 51).

Third, Allport opposed collecting data from people with extreme (i.e., clinical) personalities. Whereas Freud saw a continuum between the normal and abnormal, Allport saw a clear distinction. To Allport, the extreme personality functioned at an infantile level.

The only proper way to study personality, he believed, was to collect data from emotionally healthy adults. Other populations, such as people with neurosis, children, and animals, should not be compared with typical adults. No functional similarity in personality existed between child and adult, abnormal and normal, or animal and human, as far as he was concerned.

Allport Makes Each Person Unique

Another distinguishing feature of Allport's theory is his emphasis on the uniqueness of personality as defined by each person's traits. He opposed the traditional scientific emphasis on forming general constructs or laws to be applied universally. He argued that personality is not general or universal but is particular and specific to the individual.

The Life of Allport (1897–1967)

Restrictions, Morality, and No Bright Colors

Born in Montezuma, Indiana, Allport was the youngest of four sons. His mother was a teacher, and his father was a salesman who decided to become a doctor. Before Allport was born, his family was in such dire financial circumstances while his father attended medical school in Baltimore that he smuggled drugs from Canada into the United States and sold them to support the family.

When the law came knocking on the front door, he skipped out the back and escaped over a fence. He took the family to Indiana and opened a private practice in which Allport believed his own birth was his father's first case.

The devout religious beliefs and practices of Allport's mother dominated the household. No smoking, drinking, dancing, or card playing were allowed, nor could a family member wear bright colors, distinctive clothing, or jewelry of any kind. Allport wrote that his mother was "on the severe side with a strong sense of right and wrong and quite strict in her moral ideals" (quoted in Nicholson, 2003, p. 17).

Isolation and Rejection

Too young to be a playmate to his older brothers, Allport was isolated from children outside the family as well. "I fashioned my own circle of activities," he wrote later. "It was a select circle, for I never fitted the general boy assembly" (Allport, 1967, p. 4).

"I suffered agonies on the playground. I never really got on with my brothers. They didn't like me and they weren't kind and I couldn't possibly compete with them. They were all a little more masculine in type than I was" (quoted in Nicholson, 2003, p. 25).
He described himself as skillful with words but not good at sports or games and as someone who worked hard to be the center of attention of the few friends he did have.

In Allport's personality theory, one of the major propositions is that psychologically healthy adults are unaffected by childhood events. Perhaps reflecting this belief, Allport revealed little about his childhood years. What he did tell, however, demonstrates a parallel between his own early experiences and the theory he later developed.

Inferiority

Arising from his childhood conditions of isolation and rejection, Allport developed inferiority feelings for which he attempted to compensate by striving to excel. He wrote about the identity quest that resulted from his inferiority feelings with regard to his brothers and other children. As Allport grew older, he began to identify with his oldest brother, Floyd, and reported feeling envious of Floyd's accomplishments. Well into adulthood, Gordon Allport tried to emulate Floyd. He followed Floyd to Harvard and earned a PhD in psychology, just as Floyd had done.

Floyd became a noted social psychologist, and even when Gordon was becoming well known himself in the field, the feelings of being in his brother's shadow persisted. At the age of 31, Gordon wrote that he had "published several articles of no great importance and [was] not to be confused with my more eminent brother" (quoted in Nicholson, 2003, pp. 168–169).

It is an open question whether developing a theory that posits adult motives and interests that were independent of his childhood feelings was part of Gordon Allport's attempts to gain independence and a unique identity removed from his brother. He later formalized this idea as the concept of functional autonomy.

College Years

Although Allport ranked second in his high school graduating class of 100, he admitted to being uninspired about what to do next. At the end of the summer of 1915, he applied to Harvard and was accepted. He wrote, "Overnight my world was remade." Allport's college years were a great adventure for him as he discovered new frontiers of intellect and culture. But shocked by low grades on his first exams, he doubled his efforts and finished the year with straight A's.

Allport's interest in social ethics and social service, acquired from his parents, was reinforced at Harvard. He did volunteer work with a boy's club, a group of factory workers, and a contingent of foreign students. He also worked as a probation officer. He found these activities satisfying because he genuinely liked to help people. "It gave me a feeling of competence, to offset a generalized inferiority feeling." He believed this kind of service reflected his search for an identity (Allport, 1967, pp. 5–7).

He took several undergraduate courses in psychology but at that time did not intend to pursue a career in the field. He graduated in 1919 with a bachelor's degree, on the same day Floyd received his PhD. After graduation, Gordon spent a year on the faculty of Robert College in Istanbul, Turkey, and later accepted the fellowship Harvard offered for graduate study in psychology. His biographer noted, "The thought of becoming a psychologist and perhaps becoming more like his successful brother appealed to Allport" (Nicholson, 2003, p. 67).

Allport Meets Freud

On his return trip to the United States, Allport stopped in Vienna to see one of his brothers. While there, he sent a note to Sigmund Freud and received an invitation to visit. When Allport entered Freud's office, he found Freud waiting patiently, expecting the young American to explain the purpose of his visit.

The awkward period of silence lengthened until an uncomfortable Allport, looking desperately for something to say, blurted out an account of an incident he had seen on the streetcar ride to Freud's office. He told of watching a small boy who had an obvious fear of dirt. Everything seemed dirty to the child. He even changed his seat, telling his mother not to let a dirty man sit beside him.

Freud studied the prim, proper, carefully groomed young man and asked, "Was that little boy you?" By asking this question, Freud was expressing his belief that the story Allport told betrayed his own unconscious fears and conflicts.

Allport appeared to Freud to be "neat, meticulous, orderly and punctual—possessing many of the characteristics [he] associated . . . with the compulsive personality" (Pervin, 1984, p. 267). Another psychologist commented that "Freud just hit [Allport] right on the head, right on the nose" (quoted in Anderson, 1990, p. 326).

Allport was shaken by Freud's question. For the rest of his life, Allport denied that he was the super-clean, proper little boy in the story, but the incident clearly left a deep impression on him. Years later he wrote, "My single encounter with Freud was traumatic" (Allport, 1967, p. 22). He suspected that psychoanalysis probed the unconscious too deeply, as Freud tried to do with him. Psychology, Allport decided, should pay more attention to conscious or visible motivations. This was the path he chose for his study of personality.

Many years later, two American psychologists used this Freud story in a study, which found that the use of this kind of anecdote made classroom lectures, and presumably textbooks as well, more enjoyable to students. As a result, they found that students learn and remember information better when it is presented in this kind of social and personal context (Kaufman & Bristol, 2001).

Becoming a Success

Allport completed his PhD at Harvard in 1922, after two years of graduate study. His dissertation, "An Experimental Study of the Traits of Personality," foreshadowed his lifelong work and was the first research ever to be conducted on personality traits in the United States. Awarded a traveling fellowship, Allport spent two years studying with noted psychologists in Germany and England. He returned to Harvard as an instructor, offering a course on the psychological and social aspects of personality, which was apparently the first formal American college course on the subject. He spent nearly four decades at Harvard, conducting research on personality and social psychology and instructing several generations of students.

Considered an elder statesman in the field, Allport received many awards, including the American Psychological Foundation's Gold Medal, the American Psychological Association's Distinguished Scientific Contribution Award, and the presidencies of the American Psychological Association and the Society for the Psychological Study of Social Issues.

The Nature of Personality

In his book *Pattern and Growth in Personality*, Allport reviewed some 50 definitions of personality before offering his own: "Personality is the dynamic organization within the individual of those psychophysical systems that determine . . . characteristic behavior and thought" (Allport, 1961, p. 28).

By *dynamic organization*, Allport means that although personality is constantly changing and growing, the growth is organized, not random. *Psychophysical* means that personality is composed of both mind and body functioning together as a unit. It is underlaid by a combination of biological and emergent mental processes.

By *determine*, Allport means that all facets of personality activate or direct specific behaviors and thoughts. The phrase *characteristic behavior and thought* means that everything we think and do is characteristic, or typical, of us. Thus, each person is unique.

The Roles of Heredity and Environment

To support his emphasis on the uniqueness of the individual personality, Allport stated that we reflect both our heredity and our environment. Heredity provides the personality with raw materials, such as physique, intelligence, and temperament, that may then be shaped, expanded, or limited by the conditions of our environment. In this way, Allport invokes both personal and situational variables to indicate the importance of both genetics and learning.

Allport argued that our genetic background is responsible for the major portion of our uniqueness. An infinite number of possible genetic combinations exist, and, except for identical twins, the chance that someone else's genetic endowment will be duplicated in any one of us is too small to consider, such that our genetics are one important source of uniqueness.

Allport believed that our genetic endowment interacts with our social environment, and no two people, not even siblings brought up in the same house, have precisely the same environment. Experiences and learning, then, are a second source of uniqueness. The inevitable result is a unique personality. Therefore, Allport concluded that to study personality, psychology must deal with the individual case and not with average findings among groups.

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Gordon Allport proposed that within an individual, child and adult personality are separate, in that we are not completely bound by our childhood experiences. We can consciously grow and change in adulthood.

Much research since Allport's initial arguments has supported the idea that personality traits can be attributed to a combination of our genetics and our environment (Bleidorn et al., 2014; Briley & Tucker-Drob, 2014; Turkheimer et al., 2014). The idea that individuals have unique personalities is supported by findings on fine-grain personalities components called "nuances," which fall below "facets," which are parts of broader "traits" (e.g., bitterness and touchiness are nuances of angry hostility, a facet of neuroticism; Mõttus et al., 2017). Researchers found in a German sample that individuals are stable in these nuances across time, observers agree on which individuals have and the strength of these nuances, and there is a genetic and environmental component to these nuances (Mõttus et al., 2017). Even individuals' levels of narcissism, which can be adaptive or maladaptive, and their tendency to buy impulsively can be tied to genes and environment, as evidenced by research in China (Cai et al., 2015).

Pause for Reflection

What aspects of an environment do you think are particularly important in shaping personality?

Two Distinct Personalities for Two Stages of Life

Allport considered personality to be discrete, or discontinuous. Not only is each person distinct from all others, but each adult is also divorced from their past. He found no continuum of personality between childhood and adulthood. Primitive biological urges and reflexes drive infant behavior, whereas adult functioning is more psychological in nature. In a sense there are two personalities: one for childhood and one for adulthood. The adult personality is not constrained by childhood experiences. This unique theoretical tenet of Allport emphasizes the conscious rather than the unconscious, and the present and future rather than the past. He recognized the uniqueness of personality rather than proposing generalities or similarities for large groups of people. And he chose to study the normal rather than the abnormal personality.

Research provides some support for the idea that people's personalities are different in adulthood compared to in earlier phases when you focus on the individual. However, when you compare personalities across people, individuals remain more similar to their own personalities and different than others' personalities throughout life. Consider this example: Gordon Allport may have become less concerned about cleanliness as he matured (personality change), but throughout his whole life he was more concerned about cleanliness than was Sigmund Freud (personality stability). In a study of nearly 2,000 Americans from adolescence to 50 years later, researchers found some stability in personality traits but also a "maturity principle" that describes how most people's personalities changed over the course of adulthood to be more adaptive—that is, higher agreeableness, conscientiousness, and emotional stability (Damian et al., 2019). Similarly, in a study of personality traits and life goals (i.e., aesthetic, economic, family/relationship, hedonistic, political, religious, social goals) of people from college to midlife, people remained similar to their earlier selves in personality and goals but also matured insofar as their personalities became more adaptive and their life goals were less intense (Atherton et al., 2021). Another study with nearly 800 children in Hawaii had teachers report elementary students' personalities and then had those students 40 years later as middle-aged adults report their own personalities on self-report measures (Hampson & Goldberg, 2006). Results indicated that people's personalities changed more in the childhood phase and were more stable in the adult phase. Furthermore, some traits were more similar from childhood to adulthood (extraversion and conscientiousness), whereas others changed much more (openness to experience, agreeableness, and neuroticism/emotional stability).

Pause for Reflection

In what ways has your personality changed or stayed the same over time?

Personality Traits

Allport considered personality **traits** to be predispositions to respond, in the same or a similar manner, to different kinds of stimuli. In other words, traits are consistent and enduring ways of reacting to our environment. He summarized the characteristics of traits as follows (Allport, 1937):

1. Personality traits are real and exist within each of us. They are not theoretical constructs or labels made up to account for behavior.
2. Traits determine or cause behavior. They do not arise only in response to certain stimuli. They motivate us to seek appropriate stimuli, and they interact with the environment to produce behavior.
3. Traits can be demonstrated empirically. By observing behavior over time, we can infer the existence of traits in the consistency of a person's responses to the same or similar stimuli.
4. Traits are interrelated; they may overlap, even though they represent different characteristics. For example, aggressiveness and hostility are distinct but related traits and are frequently observed to occur together in a person's behavior.
5. Traits vary with the situation. For example, a person may display the trait of neatness in one situation and the trait of disorderliness in another situation.

Initially, Allport proposed two types of traits: individual and common. *Individual traits* are unique to a person and define their character. *Common traits* are shared by a number of people, such as the members of a culture.

traits To Allport, distinguishing characteristics that guide behavior. Traits are measured on a continuum and are subject to social, environmental, and cultural influences.

It follows that people in different cultures will have different common traits. Common traits are also likely to change over time as social standards and values change. This demonstrates that common traits are subject to social, environmental, and cultural influences.

Personal Dispositions

Allport later realized that some confusion could result from calling both of these phenomena *traits*, and so he revised his terminology. He relabeled common traits as traits and individual traits as **personal dispositions**. Our personal dispositions do not all have the same intensity or significance. They may be cardinal traits, central traits, or secondary traits.

A **cardinal trait** is so pervasive and influential that it touches almost every aspect of a person's life. Allport described it as a ruling passion, a powerful force that dominates behavior. He offered examples of sadism and chauvinism. Just how much that cardinal trait drives thoughts, feelings, and behaviors differs across people.

Everyone has a few **central traits**, some 5 to 10 themes that best describe our behavior. Allport's examples are aggressiveness, self-pity, and cynicism. These are the kinds of characteristics we would mention when discussing a friend's personality or writing a letter of recommendation.

The least influential individual traits are the **secondary traits**, which appear much less consistently than cardinal and central traits. Secondary traits may be so inconspicuous or weak that only a close friend would notice evidence of them. They may include, for example, a minor preference for a particular type of music or for a certain food.

This framework for traits has been applied to understand human behavior. For example, in the context of consumer behavior, researchers have examined how cardinal traits (i.e., extraversion, agreeableness, conscientiousness, creativity, and neuroticism/emotional stability) and central traits (i.e., value consciousness, materialism) predict intentions to bargain or complain in the process of purchasing a car (Harris & Mowen, 2001). Among their many findings, the researchers concluded that people higher in extraversion were more willing to complain, people higher in instability were more materialistic and in turn prone to bargain, and people higher in creativity were more materialistic and value driven and therefore had more intentions to bargain and complain.

personal dispositions Traits that are peculiar to an individual, as opposed to traits shared by a number of people.

cardinal traits The most pervasive and powerful human traits which define our unique personalities.

central traits The handful of traits that describe a person's behavior.

secondary traits The least important traits that a person may display inconspicuously and inconsistently.

Pause for Reflection

What are two examples of your own cardinal traits? Central traits? Secondary traits?

Motivation: What We Strive for

Allport believed that the central problem for any personality theory is how it treats the concept of motivation. Allport emphasized the influence of a person's present situation not only in his personality theory but also in his view of motivation. It is the individual's current state that is important, not what happened in the past during toilet training, school, or some other childhood crisis. Whatever happened in the past is exactly that: past. It is no longer active and does not explain adult behavior unless it exists as a current motivating force.

Cognitive processes, that is, our conscious plans and intentions, are a vital aspect of our personality. Allport criticized approaches such as Freud's that focused on unconscious, irrational forces at the expense of the conscious and rational. Deliberate intentions are an essential part of our personality. What we want and what we strive for are the keys to understanding our behavior. Thus, Allport attempted to explain the present in terms of the future rather than in terms of the past.

The importance of being motivated by the future is essential to individual growth and goal pursuit. For example, in a study of people who smoke, those who thought about the future enough to make a plan to quit were better able to quit smoking a year and a half later (Chassin et al., 2010). In another study, with American college students, researchers sought to understand how academic motivation was associated with personal meaning of university education (Henderson-King & Smith, 2006). They found, for example, that students who were enjoyment-motivated found their education more meaningful in terms of finding direction for the

future as well as career preparation, independence, learning, and self-development, which are all future oriented.

Functional Autonomy

Allport's concept of **functional autonomy of motives** proposes that the motives of mature, emotionally healthy adults are not functionally connected to the prior experiences in which they initially appeared. Forces that motivated us early in life become autonomous, or independent, of their original circumstances.

Allport offered the metaphor of a tree. It is obvious that the tree's development can be traced back to its seed. Yet when the tree is fully grown, the seed is no longer required as a source of nourishment. The tree is now self-determining, no longer functionally related to its seed.

Similarly, when we grow up, we become independent of our parents. Although we remain related to them, we are no longer functionally dependent on them, and they (should) no longer control or guide our lives.

Consider the example of new college graduates embarking on a career in business. They may be motivated to work hard in order to achieve financial success and security. Eventually their investment of time and energy may pay off, and they amass enough money to be able to retire. Yet, some continue to work just as hard as they did when they started out.

The retired 55-year-old is no longer striving for the same goals that the 25-year-old did. The goal of financial security has been reached and surpassed. The motivation to work and run a business, once a means to a specific end (money, for example), has now become an end in itself. The motive has become independent of its original source, transformed into something autonomous. Therefore, adult motives cannot be understood by exploring the person's childhood, as Freud believed. The only way to understand adult motives, Allport stressed, is to investigate why people behave as they do today.

Allport proposed two levels of functional autonomy: perseverative functional autonomy and propriate functional autonomy.

Perseverative Functional Autonomy

Perseverative functional autonomy, the more elementary level, is concerned with such behaviors as addictions and repetitive physical actions such as habitual ways of performing some routine, everyday task. The behaviors continue or persevere on their own without any external reward. The actions once served a purpose, but they no longer do and are at too basic and low a level to be considered an integral part of personality.

Allport cited both animal and human examples as evidence for perseverative functional autonomy. When a rat that has been trained to run a maze for food is given more than enough food, it may still run the maze, but obviously for some purpose other than the food. At the human level, he noted our preference for routine, familiar behaviors that we continue to perform even in the absence of external reinforcement.

Propriate Functional Autonomy

Propriate functional autonomy is more important than perseverative functional autonomy and is essential to understanding adult motivation. The word *propriate* derives from **proprium**, Allport's term for the ego or self.

Propriate motives are unique to each individual. The ego determines which motives will be maintained and which will be discarded. We retain motives that enhance our self-esteem or self-image. Thus, a direct relationship exists between our interests and our abilities: We enjoy doing what we do well.

The original motivation for learning a skill, such as playing the piano, may have nothing to do with our interests. For example, in childhood we may be coerced by our parents into taking piano lessons and to practice. As we become proficient, however, we may become more committed to playing the piano. The original motive (fear of parental displeasure) has disappeared, and the continued behavior of playing the piano becomes necessary to our self-image.

The Organizing of Our Propriate Functioning

Our propriate functioning is an organizing process that maintains our sense of self. It determines how we perceive the world, what we remember from our experiences, and how our thoughts are directed. These perceptual and cognitive processes are selective. They choose from the mass of stimuli in our environment only those that are relevant to our interests and values. This organizing process is governed by the

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functional autonomy of motives The idea that motives in the normal, mature adult are independent of the childhood experiences in which they originally appeared.

perseverative functional autonomy The level of functional autonomy that relates to low-level and routine behaviors.

propriate functional autonomy The level of functional autonomy that relates to our values, self-image, and lifestyle.

proprium Allport's term for the ego or self.

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Allport's theory emphasized that no two people are alike, that each of us is a unique combination of traits, which are shaped by both genes and experiences.

following three principles: organizing the energy level, mastery and competence, and propriate patterning.

The first principle, *organizing the energy level,* explains how we acquire new motives. These motives arise from necessity to help consume excess energy that we might otherwise express in destructive and harmful ways. For example, when people retire from their jobs, they have extra time and energy that, ideally, they should direct toward new interests and activities.

Mastery and competence, the second principle, refers to the level at which we choose to satisfy motives. It is not enough for us to achieve at an adequate level. Healthy, mature adults are motivated to perform better and more efficiently, to master new skills, and to increase their degree of competence.

The third principle, *propriate patterning*, describes a striving for consistency and integration of the personality. We organize our perceptual and cognitive processes around the self, keeping what enhances our self-image and rejecting the rest. Thus, our propriate motives are dependent on the structure or pattern of the self.

Allport noted that not all behaviors and motives could be explained by these principles of functional autonomy. Some behaviors, such as reflexes, fixations, neuroses, and behaviors arising from biological drives, are not under the control of functionally autonomous motives.

Personality Development in Childhood: The Unique Self

As we noted, Allport chose the term *proprium* for the self or ego. He rejected the words *self* and *ego* because of the diversity of meanings ascribed to them by other theorists. We can best understand the word *proprium* by considering it in the sense of the adjective *appropriate.* The proprium includes those aspects of personality that are appropriate for our distinctive personalities. These aspects are unique to each of us and unite our thoughts, feelings, attitudes, perceptions, and intentions.

Stages of Development

Allport described the nature and development of the proprium over seven stages from infancy through adolescence (refer to Table 7.1).

Table 7.1 The development of the proprium

Stage	Development
1. Bodily self	Infants (0–1 years) become aware of their own existence and distinguish their own bodies from objects in the environment.
2. Self-identity	Children realize that their identity remains intact despite the many changes that are taking place from 1–2 years old.
3. Self-esteem	Children learn to take pride in their accomplishments at 2–3 years old.
4. Extension of self	Children (4–5 years old) come to recognize the objects and people that are part of their own world.
5. Self-image	Children develop actual and idealized images of themselves and their behavior and become aware of satisfying (or failing to satisfy) parental expectations from ages 5–6.
6. Self as a rational coper	Children, from ages 6 through 12, begin to apply reason and logic to the solution of everyday problems.
7. Propriate striving	Young people, during adolescence (12–18 years old), begin to formulate long-range goals and plans.
8. Adulthood	Normal, mature adults are functionally autonomous, independent of childhood motives. They function rationally in the present and consciously shape their own personalities.

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In Allport's first stage of development, infants begin to realize that they have a unique body that is separate from the rest of the world.

Before the proprium begins to emerge, the infant experiences no self-consciousness, no awareness of self. There is not yet a separation of "me" from everything else. Infants receive sensory data from the external environment and react to them automatically and reflexively, with no ego to mediate between stimulus and response. Allport described infants as pleasure-seeking, destructive, selfish, impatient, and dependent. He called them "unsocialized horrors." They possess little of what could be called a "personality." The infant simply is driven by reflexes to reduce tension and maximize pleasure.

The first three stages in the development of the proprium span the years from birth to about age 4. The bodily self develops when infants begin to be aware of what Allport referred to as a "bodily me." Infants under the age of 8 months may still perceive themselves as being one with their mothers, experiencing "bodily overlap," as evidenced by research indicating that young infants prefer to experience a caress of their faces in synchrony to their mother's (vs. a stranger's) face being caressed as well (Maister et al., 2020). After this point, infants begin to distinguish between themselves and other people, and themselves and other objects, such as their own fingers and the object they are grasping.

The self-identity stage, occurring from 1 to 2 years of age, is marked by a sense of continuity of one's identity. Children realize that they remain the same people despite changes in their bodies and their abilities. Self-identity is enhanced when children learn their names and see themselves as distinct from others. Research in Russia found that over time, children between 1.5 and 4 years old increase in their "spatial self-identity" as measured by the senses of touch, self-movement, balance, and their understanding of the boundary between "I" and "the world" (Abdulaeva & Smirnova, 2021).

Self-esteem develops from ages 2 to 3 when they discover that they can accomplish things on their own. They are motivated to build, explore, and manipulate objects, behaviors that sometimes can be destructive. Indeed, by this age, children learn new abilities and skills by observing others in free play, whereas in the past they may have needed an adult to model them directly (Sim & Xu, 2017). If parents frustrate their child's need to explore at this stage, then the emerging sense of self-esteem can be thwarted, replaced by humiliation and anger. Self-esteem development may be supported not only by parents but also grandparents. In a three-generation, three-year longitudinal study with Mexican-origin families in America, the more cultural socialization between the grandmother and mother when the child is age 3, the stronger the child's independent receptive language and interactive play with peers two years later (Williams et al., 2020).

The extension-of-self stage involves the growing awareness of objects and people in the environment and the identification of them as belonging to the child from ages 4 to 5. Children speak of "my house," "my parents," and "my school." At this point, objects (e.g., toy cars, balls, and dolls) are imbued with personal importance, and children are not inclined to share them with others if the others have acted immorally unless "the object had been cleaned of all remnants of the child's self" (Diesendruck & Perez, 2015).

A self-image develops next, from age 5 to 6, incorporating how children perceive and would like to

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From ages 4 to 5, in the extension-of-self stage, children establish meaningful ownership or relational connections with people or objects beyond themselves, for example, "my teddy bear"

perceive themselves. These actual and ideal self-images develop from interaction with the parents, who make the child aware of their expectations and of the extent to which the child is satisfying or failing to satisfy those expectations. Children are more likely to tell the truth even when a lie would benefit them when an adult has modeled honesty (Engarhos et al., 2020) or believe others have expectations for their honesty because of their moral reputation (Fu et al., 2016). By 6 years old, children understand fairness expectations for themselves and others, as evidenced in their willingness to punish other children for being unfair in a game (even if they weren't themselves affected by the unfairness; McAuliffe et al., 2015).

The self-as-a-rational-coper stage occurs between ages 6 and 12, when children realize that reason and logic can be applied to solving everyday problems. By this time, children can reason about what is the most efficient action to complete a goal (e.g., Gönül & Paulus, 2021). The more children can be rational and reflect and deliberate on their own decision making, the more successful they are at meeting challenges in this phase of their lives. For example, the more cognitively reflective and rational children are, the better they learn conceptual knowledge in early science and mathematics (Young & Shtulman, 2020). Additionally, research suggests that in this phase, children have an idea about what identity is, what makes people who they are—namely, moral traits that affect interpersonal relationships and memories of personal experiences (Jirout Košová et al., 2021).

The propriate striving stage follows, when adolescents (ages 12–18) begin to formulate plans and goals for the future. Until they do so, their sense of self (their proprium) will remain incomplete. In a three-year longitudinal study of over 1,000 Romanian adolescents, the more adolescents searched for meaning, the more they experienced meaning and committed identity in life (Negru-Subtirica et al., 2016). Another study with nearly 2,000 Dutch (from the Netherlands) adolescents found that the stronger identity and career commitments people made, the fewer stressful life events they experienced, and the stronger their interpersonal commitments, the less depressive symptomatology they reported (van Doeselaar et al., 2018).

Pause for Reflection

Do you think you skipped any developmental phases? Went through them in a different order? Got stuck at one?

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In the propriate striving stage, adolescents make plans for the future, which supports development of their self-identity (proprium).

The Importance of the Infant–Mother Bond

Our social interaction with our parents or other caregivers is vitally important throughout all the stages of development of the proprium. Most important of all, however, is the infant–mother bond as a source of affection and security.

If the mother or primary caregiver provides sufficient affection and security, the proprium will develop gradually and steadily, and the child will achieve positive psychological growth. Childhood motives will be free to be transformed into the autonomous propriate strivings of adulthood. A pattern of personal dispositions will form, and the result will be a mature, emotionally healthy adult.

If childhood needs are frustrated, however, the self will not mature properly. The individual may become insecure, aggressive, demanding, jealous, and self-centered. Psychological growth is stunted. The result is a neurotic adult who functions at the level of childhood drives.

Adult motives do not become functionally autonomous but remain tied to their original conditions. Traits and personal dispositions do not develop, and the personality remains undifferentiated, as it was in infancy. Much research supports the contention that mother–child bonds are important for the socioemotional development and independence of children (e.g., Clark & Ladd, 2000; Ispa et al., 2017; Raby et al., 2015; Sobol-Kwapińska et al., 2020). Mother–child bonds, if healthy, shape secure attachment; if unhealthy, they predict insecure (anxious or avoidant) attachment style (Mikulincer & Shaver, 2003, 2007). Attachment style, largely affected by relationships with the primary

caregiver early in life, predicts important outcomes in adulthood like emotional connection with romantic partners (Simpson et al., 2011), drug addiction (Karimi et al., 2019), and moral decision making (Maranges et al., 2022).

The Healthy Adult Personality

In Allport's theory, the healthy personality changes and grows from being a biologically dominated organism in infancy to a mature psychological organism in adulthood. Our motivations become separated from childhood and are oriented toward the future. As we noted, if our childhood needs for affection and security have been met, the proprium will develop satisfactorily. The adult personality grows out of childhood and is no longer dominated or determined by childhood drives. Indeed, research suggests that adults who overcome crises of earlier times are more psychologically mature, with higher self-management, life organization, responsibility, and integrity (Manukyan et al., 2015).

Allport described six criteria for normal, mature, emotionally healthy adult personalities:

1. Mature adults extend their sense of self to people and activities beyond the self.

   Example empirical support: A two-year longitudinal study of American adults in romantic relationships found that those who wanted their partners to be part of their self-identities and who were indeed close to their partners had the best relationship and psychological well-being (Frost & Forrester, 2013).

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According to Allport, the mature, well-adjusted adult connects the self to other people and activities, warmly relates to others, feels emotional security, has a realistic perception of life, develops skills, commits to work, has a sense of humor about themselves, and lives by a unified philosophy of life.

2. Mature adults relate warmly to other people, exhibiting intimacy, compassion, and tolerance.

   Example empirical support: Research with Pakistani college students found that individuals who related warmly to others (i.e., had high empathic concern) were the most socially competent: They are able to initiate interactions and relationships, be honest about what they need and when their feelings are hurt, share intimate personal information, emotionally support others, and manage interpersonal conflicts well (Nazir & Rafique, 2019). Research in Russia found that over time, people become more understanding and tolerant of others with different attitudes than themselves and are more well-adjusted (Manukyan et al., 2015).

3. Mature adults' high degree of self-acceptance helps them achieve emotional security.

   Example empirical support: The same study in Russia also found that those mature adults were significantly more emotionally stable, self-confident, calm, and adaptable (Manukyan et al., 2015). This process of self-acceptance may begin in adolescence. A study of Indian adolescents found that those high in emotional maturity are more self-accepting in that they have more self-confidence and a stronger sense of security in themselves (Rani et al., 2015).

4. Mature adults hold a realistic perception of life, develop personal skills, and make a commitment to some type of work.

   Example empirical support: Adults with high psychological maturity were more realistic than those with low maturity (Manukyan et al., 2015). Furthermore, young adults in Poland who developed skills and committed to work (i.e., had vocational roles) had more psychological maturity and stronger adult identities (Piotrowski et al., 2020).

5. Mature adults have a sense of humor and self-objectification (an understanding of or insight into the self).

   Example empirical support: The same research with Pakistani college students cited previously found that individuals who tended to display self-referencing humor had the best socioemotional functioning (Nazir & Rafique, 2019).

6. Mature adults subscribe to a unifying philosophy of life, which is responsible for directing the personality toward future goals.

   Example empirical support: In two studies with American young adults, researchers examined how

life philosophies (i.e., growth goals) shaped social–cognitive maturity and social–emotional well-being (Bauer & McAdams, 2004). Life philosophies that featured conceptual exploration were associated with more maturity, and those that featured intrinsic interests were associated with more well-being.

By meeting these six criteria, adults can be described as emotionally healthy and functionally autonomous, independent of childhood motives. As a result, they cope with the present and plan for the future without being victimized by what happened to them in their early years. Research supports the idea that well-adjusted, mature adults function in these ways.

Pause for Reflection
Which two of Allport's criteria of the well-adjusted, mature adults are most important to you?

The Study of Values

Allport and two colleagues developed a self-report assessment test called the Study of Values (Allport et al., 1960). They proposed that our personal values are the basis of our unifying philosophy of life, which is one of the six criteria for a mature, healthy personality.

Our values are personality traits and represent strongly held interests and motivations. Allport believed that everyone possesses some degree of each type of value, but one or two of these will be more dominant in the personality. The categories of values are as follows.

1. *Theoretical values* are concerned with the discovery of truth and are characterized by an empirical, intellectual, and rational approach to life.
2. *Economic values* are concerned with the useful and practical.
3. *Aesthetic values* relate to artistic experiences and to form, harmony, and grace.
4. *Social values* reflect human relationships, altruism, and philanthropy.
5. *Political values* deal with personal power, influence, and prestige in all endeavors, not just in political activities.
6. *Religious values* are concerned with the mystical and with understanding the universe as a whole.

Research with this framework and measure continues today, though many more frameworks and measures have built off of Allport's as well. In a study of industrial design students in Mexico, in the context of their studies and career goals, students reported that they valued the economic, theoretical, and aesthetic above the religious, political, and social interests (Flores, 2016).

A study of Bulgarian university students employed a measure from the Work Importance Study to capture what college students valued most. Those college students held values consistent with Allport's ideas about what is important to adults: economic security, personal development, ability utilization, achievement, and advancement (Bayrakova, 2015). In a three-year longitudinal study of adults from many phases of life in New Zealand, researchers measured change in the Schwartz value clusters of Conservation, Openness to Change, Self-Transcendence, and Self-Enhancement (Milfont et al., 2016). They found that although values tended to be stable across the life span, there were a few changes. Conservation values were most stable at age 50 for women and then decreased later in life. Older adults, and especially women, tended to highly value self-transcendence and conservation, which reflects a focus on the well-being of others and maintenance of tradition in families. Younger adults, and especially men, tended to value self-enhancement and openness to change, which reflect the pursuit of status, power, and independence. Using the same Schwartz framework, one researcher examined the most important values among low-income, high-ability middle school students in America; those values related to conservation and self-transcendence (Cross, 2022). In a large study of values across multiple cultures in the Netherlands, Austria, and Spain, including over 1,600 participants, researchers found common value components of Interpersonal Relatedness, Status and Respect, Commitment and Tradition, Competence, and Autonomy, which cohere closely to Allport's values (De Raad et al., 2016).

Pause for Reflection
Which of Allport's values are most important to you? Which are least important to you?

Expressive Behavior

Allport conducted considerable research on what he called **expressive behavior**, described as behavior that expresses our personality traits. He

expressive behavior Spontaneous behavior, usually displayed without our conscious awareness, that shows our personality.

also identified **coping behavior**, which is oriented toward a specific purpose and is consciously planned and carried out. Coping behavior is determined by needs inspired by the situation and is ordinarily directed toward bringing about some change in our environment.

The Nature of Expressive Behavior

Expressive behavior is spontaneous and reflects basic aspects of the personality. In contrast to coping behavior, expressive behavior is difficult to change, has no specific purpose, and is usually displayed without our awareness. Allport offered the example of public speaking. The speaker communicates with the audience on two levels.

The formal, planned level (coping behavior) includes the lecture's content. The informal, unplanned level (expressive behavior) consists of the speaker's movements, gestures, and vocal inflections. The speaker may be nervous or may talk rapidly, pace back and forth, or fidget with an earring. These spontaneous behaviors can express elements of the speaker's personality.

In his landmark study of expressive behavior, Allport gave participants a variety of tasks to perform and then judged the consistency of their expressive movements over the different situations (Allport & Vernon, 1933). He found a high level of consistency in voice, handwriting, posture, and gestures. From these behaviors, he deduced the existence of such traits as introversion–extraversion.

There has been considerable theoretical and experimental work describing both facial and vocal expressive behavior (see Russell et al., 2003). This research has found that personality can be assessed from voice recordings, films, and videotapes. Facial expressions, vocal inflections, and idiosyncratic gestures and mannerisms can reveal personality traits. The expressive behaviors linked to specific traits have even been assessed from still photographs (Allport & Cantril, 1934; Berry, 1990; DePaulo, 1993; Riggio & Friedman, 1986; Riggio et al., 1990).

Researchers have accumulated an impressive body of evidence demonstrating that some people can form reliable impressions of a stranger's personality based solely on facial appearance and expression (Berry & Wero, 1993). For example, observers have accurately assessed personality factors such as anxiety from watching a film of the person for no more than 30 seconds (Ambody & Rosenthal, 1992). That is, personality perception can occur with "thin slices" of expressive behavior. Recent research suggests that it is important to have enough nonverbal behaviors (NVBs) within those thin slices, but that one-minute slices that contain the NVBs of gaze, gestures, nods, self-touch, and smiles have reasonably strong predictive validity (Murphy et al., 2019).

Coding Facial Expressions

A long-term research program conducted by Paul Ekman identified facial expressions of seven emotions that can be objectively and consistently distinguished from one another. These emotions are anger, contempt, disgust, fear, sadness, surprise, and happiness (Ekman et al., 1997). Ekman, director of the Human Interaction Laboratory at the University of California at San Francisco, and his colleagues have developed a coding system based on their analysis of 43 facial muscles. The system provides 3,000 different configurations useful in reading the emotional expressions in a person's face.

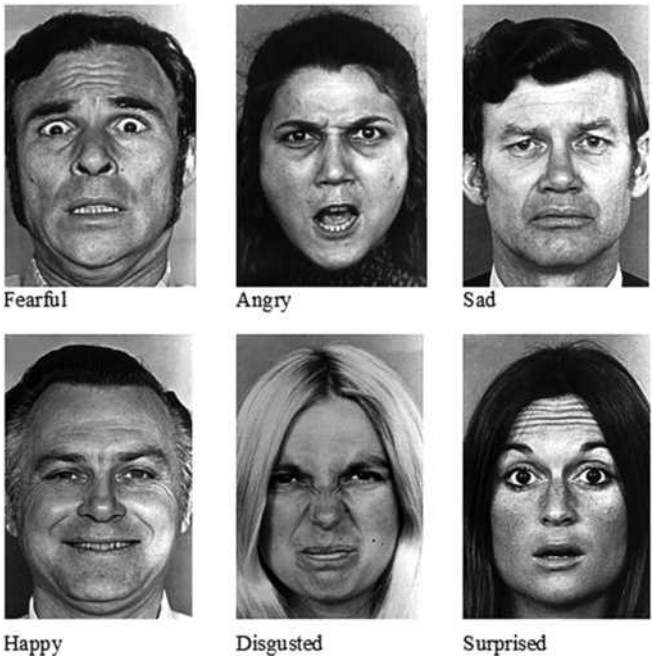
This Facial Action Coding System (FACS) is used in the United States by police departments, as well as the CIA and the FBI, to detect lying by suspected criminals and terrorists. According to the FACS, tiny movements of their facial muscles will betray them (Vicianova, 2015). In 2009, Ekman was named by *Time* magazine as one of the world's 100 most influential people (Taylor, 2009).

Other research indicates that some basic aspects of personality are revealed by facial expressions. For example, neuroticism reveals itself in looks of anger, contempt, and fear. Agreeableness shows in laughter and other expressions of friendly social interaction.

Extraversion appears in smiles, laughter, and other expressions of enjoyment and amusement. Conscientiousness is marked by expressions of embarrassment, including a tightly controlled smile, an averted gaze, and head movements down and away from the observer (Keltner, 1997).

We also recognize smiles by unconsciously mimicking them. By automatically using the same muscles as the person we are perceiving, our brain receives feedback that we feel pleasant emotions similar to the person smiling at us (Niedenthal et al., 2010; Zimmer, 2011). A large, international

coping behavior Consciously planned behavior determined by the needs of a given situation and designed for a specific purpose, usually to bring about a change in one's environment.



Here are some examples of the facial expressions that Ekman and Friesan find most people across cultures can identify.

(nineteen-country) multi-lab research project with nearly 4,000 participants has amassed a great deal of evidence that merely altering one's facial muscles into a smile can lead to people's feeling happier (Coles, March, et al., 2022).

Emotional States and Facial Expressions

Facial expressions can reveal personality and emotional information. Type A behavior, which includes reactive hostility and time urgency, has been distinguished from Type B behavior, which includes less reaction and lack of time urgency, by expressions of disgust, glaring, grimacing, and scowling (Chesney et al., 1997).

Facial expression differences can also help capture emotions related to mental health challenges that may benefit from intervention. Research with Japanese college students found that those who scored high on a test of anxiety exhibited different facial expressions, particularly around the mouth and the left side of the face, than did those who scored low on anxiety (Nakamura, 2002). A study of patients with depression in Switzerland found that facial expressions distinguished those who later attempted suicide from those who did not (Heller & Haynal, 1997).

However, it is important to be sensitive to how physical differences can affect expressions. With this in mind, researchers sought to identify reliable emotional cues from expressive behavior in people with Parkinson's disease, which affects physical movement (Wang & Tickle-Degnen, 2018). Coding expressive behavior of participants discussing enjoyable events, the researchers found that more macro motor expressions, smiling, and laughing signaled more positive emotionality across people. Women displayed more negative emotionality via less conversational engagement but also smiled and laughed more.

Age, gender, and puberty influence the development of facial emotion recognition

Variation in Expressive Behaviors

Because people are unique and vary from each other, with different experiences and personalities, there are also differences in displays and decoding of expressive behaviors.

Effects of Gender and Age

It has been found that women and younger people are better at correctly recognizing emotions in facial expressions than men and older people (Sasson et al., 2010). The ability of children to read facial expressions accurately can occur as early as the age of 5 and improves rapidly thereafter (Gao & Maurer, 2010).

An analysis of the yearbook photographs of women college graduates found that those who exhibited positive emotional expressions at age 21 scored higher on self-report inventories of feelings of subjective well-being when tested again later at ages 27, 43, and 52. They also reported better marriages and scored higher in affiliation, competence, and achievement orientation than did those who displayed less positive emotion in their yearbook pictures at age 21 (Harker & Keltner, 2001).

Interpreting Facial Expressions

Sometimes our personal experiences influence our ability to recognize emotions in the facial expressions of others. For example, a study of 8- to 10-year-old children who had been physically abused indicated that they could more readily identify facial displays of anger in pictures of female adults than could a control group of children who had not been abused (Pollak & Sinha, 2002).

A study of adults demonstrated that emotional state may influence the ability to read the facial expressions of other people. Those diagnosed with major depression needed to see facial expressions of greater intensity in order to identify correctly happiness on the faces of the pictures they were shown. In contrast, to correctly identify sadness they required less intense facial expressions (Joormann & Gotlib, 2006).

Children who scored high on a scale of social anxiety were better at correctly interpreting facial expressions. Adults higher in depression symptoms were better in recognizing sad facial expressions than adults who were not depressed (Ale et al., 2010; Gollan et al., 2010).

A study of Japanese children found that those who spent more time playing video games were better at recognizing facial expressions correctly than those who did not play video games as much (Tamamiya & Jiraki, 2013).

It has also been found that close friends are far more accurate in decoding emotions such as sadness, anger, and happiness than are casual acquaintances (Zhang & Parmley, 2011). Thus, not only do our personalities shape our expressive behaviors, but they shape what we pick up on in others' expressive behaviors.

Cultural Differences in Facial Expressions

Are facial expressions the same the world over? Or do they differ from one culture to another? Studies of American and Chinese infants and adults found that some basic emotions were revealed by identical facial expressions in both cultures and in both age groups (Albright et al., 1997; Camras et al., 1998).

However, a study comparing facial expressions of American, Chinese, and Japanese infants reached a different conclusion. Chinese infants displayed consistently less variety in facial expressive behavior than American and Japanese infants. American infants differed significantly in facial expressions of emotions from Chinese infants but not so much from Japanese infants (Camras, 1998).

A study comparing facial expressions from a remote tribe in northwestern Namibia in Africa found that their facial expressions of emotions did not match those of American participants. Suggesting that what we consider canonical expressions of emotions may not be universal (Gendron et al., 2014).

Additional research involving 3-year-old girls found that White children smiled more than mainland Chinese or Chinese American children. The degree of maternal strictness and the number of other children and adults in the home also influenced the intensity of facial expression in those cultures. The depth to which the girls' faces expressed their emotions was found to vary as a function of both cultural and family characteristics (Camras et al., 2006).

A study in which pictures of faces had been digitized so as to be neutral (not displaying any emotion) found that White faces were judged to have angry expressions more often than Black faces, and Black faces were judged to have happy or surprised expressions more often (Zebrowitz et al., 2010).

Research involving adults in the United States and in Japan suggests that each group was much better at recognizing the facial expressions of people of their own culture (Dailey et al., 2010). The same cultural differences between East and West in recognizing facial expressions were found when subjects were shown different faces on robots (Trovato et al., 2014).

Consistent differences were found in facial recognition of emotions between Eastern and Western cultures. Even the ways in which faces changed to represent emotions differed. In one study, people in Eastern cultures expressed emotion primarily with the eyes, while those in Western cultures were more likely to use eyebrows and mouth to express their feelings (Jack et al., 2012). Another comparison found that people in Hong Kong, Singapore, and Taiwan made less intense facial expressions in their Facebook pictures than Americans did (Huang & Park, 2013).

When White Americans and Asian Americans who scored high in depression were shown a humorous film, the White Americans exhibited fewer smiles and other facial reactions than did the Asian Americans (Chentsova-Dutton et al., 2010).

There appear to also be cultural differences in how people perceive changes in facial expressions, whether they are more or less affected by the last facial expression of the person they're observing. Researchers found that people from an Eastern culture (China) were influenced more by the preceding emotional expression (i.e., angry, fearful, or neutral expressions) when judging a person's current smiling facial expressions compared to people from a Western culture (Canada, the Netherlands) (Fang et al., 2021). Even with these cultural differences, there is some universality to many common emotional expressions. In a large study of individuals in nine countries (China, South Korea, India, Japan, Pakistan, Poland, Turkey, Germany, and the United States), people tended to similarly identify 18 emotions by the expressive behavior (amusement, anger, boredom, confusion, contentment, coyness, desire, disgust, embarrassment, fear, happiness, interest, pain, pride, sadness, shame, surprise, sympathy) (Cordaro et al., 2020).

Pause for Reflection

Do you think you express certain emotions more than others? Are you better at decoding certain emotions better than others?

Highlights

Research on Expressive Behavior

Research on *expressive behavior* has found that:

- Personality traits and emotions can be assessed from facial expressions.
- Close friends are better than strangers at decoding facial expressions of emotion.
- As many as seven separate emotions can be identified in facial expressions.
- We mimic smiles, and smiling makes us feel positive affect.
- There are cultural differences in facial expression making and decoding (e.g., Eastern vs. Western).
- People are better at decoding expressions consistent with their own feelings (e.g., people with depression are better at recognizing sad expressions).

Assessment in Allport's Theory

Allport wrote more about personality assessment techniques than most other theorists did. In his popular book *Pattern and Growth in Personality* (1961), he noted that, despite the existence of many approaches to assessment, there was no single best technique.

Personality is so complex that to evaluate it we must employ many techniques. He listed 11 major methods:

1. Constitutional and physiological diagnosis
2. Cultural setting, membership, role
3. Personal documents and case studies
4. Self-appraisal
5. Conduct analysis
6. Ratings
7. Tests and scales
8. Projective techniques
9. Depth analysis
10. Expressive behavior
11. Synoptic procedures (combining information from several sources in a synopsis)

Allport relied heavily on the personal-document technique and the Study of Values. He also observed expressive behavior, which we discussed in the previous section.

The Personal-Document Technique

The **personal-document technique** involves examining diaries, autobiographies, letters, literary compositions, and other samples of a person's written or spoken records to determine the number and kinds of personality traits.

Allport's most famous case is an analysis of a collection of more than 300 letters written over a 12-year period by a middle-aged woman identified as Jenny (Allport, 1965, 1966). It was later revealed that Jenny was the mother of Allport's college roommate and had written the letters to Allport and his wife (Winter, 1993a).

In the personal-document approach, a group of raters read the autobiographical or biographical material on the subject and record the traits they find in it. Given a reasonable degree of agreement among the raters the assessments can be grouped into a relatively small number of categories. In the research with Jenny's letters, 36 raters listed nearly 200 traits. Because many terms were synonymous, Allport was able to reduce them to eight categories.

One of Allport's students performed a computer analysis on the letters to find categories of words that might indicate the existence of a particular trait (Paige, 1966). For example, words expressing anger, rage, hostility, and aggression were coded as constituting the trait of aggression.

This approach is more sophisticated and quantitative than Allport's original analysis of the letters because it involves fewer subjective judgments. The computer analysis yielded eight prominent traits in Jenny's personality that were similar to the categories Allport had identified. Because of that consistency, he concluded that his subjective approach to personality assessment provided information on traits that was valid and comparable to the more objective computer analysis.

Allport criticized psychologists who insisted that experimental and correlational methods were the only legitimate ways to study personality. He argued that not every aspect of personality could be tested in those ways, and that psychologists should be more open and eclectic in their research methodology.

He also opposed applying methods focused on participants with emotion dysregulation or mental illness, such as case studies and projective techniques, to the study of emotionally healthy people. Because case studies focus on the past, Allport considered them to be of no value for understanding healthy adults because their personality is divorced from childhood influences.

He also argued that projective techniques, such as the Thematic Apperception Test and the Rorschach inkblot test, may present a distorted picture of the normal

personal-document technique The personal-document technique involves the study of a person's written or spoken records.

personality because they deal with unconscious forces that have little effect on the normal adult personality. Allport suggested that more reliable information could be obtained by simply asking people to describe themselves, a method that reveals their dominant traits.

Allport favored the idiographic approach, that is, the study of the individual case, as indicated by his use of personal documents. However, he did also use some nomothetic methods involving the statistical analysis of differences among large samples of subjects when he believed them to be appropriate. Psychological tests, such as the Study of Values, use the nomothetic approach.

Questions About Human Nature

Allport's view of functional autonomy and personality development holds that emotionally healthy adults are not tied to or driven by childhood conflicts. Thus, his theory presents an optimistic view of adults in conscious control of their lives, rationally attending to current situations, planning for the future, and actively fashioning an identity. Always in the process of becoming, we creatively design and implement an appropriate style of life, influenced more by events of the present and plans for the future than by our past.

Allport took a moderate stance on the question of free will versus determinism. He granted free choice in our deliberations about our future, but he also recognized that some behaviors are determined by traits and personal dispositions. Once these behaviors are formed, they are difficult to change.

On the nature–nurture issue, he believed that both heredity and environment influence personality. Our genetic background supplies our basic physique, temperament, and level of intelligence. These raw materials are then shaped by learning and experience. Allport believed in each person's uniqueness. Although common traits show some universality in character individual traits or personal dispositions describe our nature more precisely.

To Allport, the ultimate and necessary goal of life is not to reduce tension, as Freud proposed, but rather to increase tension, impelling us to continually seek new sensations and challenges. When we have met one challenge, we are motivated to seek another. The reward is the process of achieving rather than the specific achievement, striving for the goal rather than reaching it. In essence, he meant that "getting there is more fun than being there." We constantly need new goals to motivate us and to maintain an optimal level of tension in the personality.

Allport's optimistic image of human nature was reflected in his personality, theories, and interest in social reform. The humanistic attitude expressed in his work was mirrored in his own personality. His colleagues and students described him as someone who genuinely cared about people and that these feelings were reciprocated.

Reflections on Allport's Theory

Allport's idiographic research approach ran counter to the main current of thought in contemporary psychology, which accepted nomothetic research instead (the study of large participant groups through sophisticated statistical analysis). Allport's focus on adults with high psychological well-being also conflicted with the then-prevalent practices that focused on clinical psychology.

Nonetheless, Allport's idea that personality is internal to people and drives patterns of thoughts, feelings, and behaviors marked the incipience of the conception of "traits," which predominate the modern landscape of personality theories. Since Allport's time, much research has focused on the importance of people's values in understanding their individuality and behaviors, though much of that work relies on adapted or different theories at this point. Allport pushed against the idea that people's characteristics are anchored only in their childhood experiences and unconscious processes, giving back agency to people through deliberation and motivation in his theory. His developmental phases lack the Freudian flavor of psychosexuality and are supported by some research. Finally, much research on expressive behavior has been conducted since Allport's introduction of it, and this work has primarily been done or inspired by Paul Ekman.

Questions and Criticisms

It is difficult to translate some of Allport's concepts into specific terms and propositions suitable for study by the experimental method. For example, how do we observe functional autonomy or propriate striving in the laboratory? How can we manipulate these concepts to test their effects?

Criticisms have been leveled against the concept of functional autonomy. Allport did not make clear how an original motive is transformed into an autonomous one. For example, once a person is financially secure, by what process is the motive to work hard for financial gain altered to become a motive to continue to work hard for the sake of the task itself? If the mechanism of transformation is not explained, how can we predict which childhood motives will become autonomous in adulthood?

Allport's emphasis on the uniqueness of personality has been challenged because his position and research

focus so exclusively on the individual that it is impossible to generalize. Many psychologists find it difficult to accept Allport's proposed discontinuity between child and adult, animal and human, psychologically normal and abnormal. They point out that research on the behavior of children, animals, and psychologically distressed people has yielded considerable knowledge about the functioning of the normal, emotionally healthy adult.

Recognition and Influence

Despite these criticisms, Allport's theory has been well received by a number of psychologists who continue to maintain that Allport's views provide a better basis for understanding personality than the approaches of most other theorists (Piekkola, 2011). His approach to personality development, his emphasis on uniqueness, and his focus on the importance of goals are reflected in the work of the humanistic psychologists Abraham Maslow and Carl Rogers (see Chapters 9 and 10).

Allport is often considered to be one of the first psychologists to bring humanistic values and concerns to the field (Jeshmaridian, 2007). Interest in Allport's work has been revived recently as part of the current focus on personality traits, which is providing empirical support for some of his ideas.

Allport's major work on the expression of emotions has been of vital importance in the development of the field of cognitive neuroscience. There has also been a revival of interest in his personal-document technique for studying personality (Barenbaum, 2008; Zunshine, 2010).

His books are written in a readable style, and his concepts have a commonsense appeal. The emphasis on conscious, rational determinants of behavior provides an alternative to the psychoanalytic position that labels people irrationally and unconsciously driven by uncontrollable forces.

Allport's proposition that people are shaped more by future expectations than by past events is congenial with a hopeful and humanistic philosophy. His most enduring contributions to psychology are making the study of personality academically respectable and emphasizing the trait approach to personality.

Pause for Reflection

Are there other aspects of Allport's theory that you think should receive more criticism or more praise?

DEI Spotlight

Allport's Theory and Diversity, Equity, and Inclusion

Allport's theory focuses on people's unique attributes, personal values, motivation, and connectedness. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individuals and Society. Gordon Allport was very concerned about diversity, equity, and inclusion for individuals, groups, and society. We begin here with a focus on the implications of Gordon Allport's emphasis on similarities and uniqueness among people. He said:

> To summarize: the most comprehensive units in personality are broad intentional dispositions, future-pointed. These characteristics are unique for each person, and tend to attract, guide, inhibit the more elementary units to accord with the major intentions themselves. This proposition is valid in spite of the large amount of unordered, impulsive, and conflictful behavior in every life. Finally, these cardinal characteristics are not infinite in number but for any given life in adult years are relatively few and ascertainable. (p. 92, Allport, *Becoming,* 1955).

All people are special, and this specialness is largely driven by plans for the future. In Allport's view, people have the agency to consider and work toward goals. One implication of this is that you cannot make assumptions about the traits of anyone because they have something in common with someone else—we have a unique combination of traits. Because it is outside the purview of personality psychology, it cannot be covered in-depth, but here it's essential to highlight one of Allport's most important contributions to psychology: the Contact Hypothesis. Formulated originally in the context of White people's racial prejudice against people of color (Allport & Kramer, 1946; Allport et al., 1954), the hypothesis is that prejudice will decrease after the person (who holds prejudicial attitudes) interacts with another person or persons from the prejudiced group, but only if their interaction is in a situation where the people

DEI Spotlight, continued

Allport's Theory and Diversity, Equity, and Inclusion

have equal status, common goals, cooperation, and support relevant authorities, law, or custom (Pettigrew et al., 2011). Since the 1950s, a massive amount of research has extended this hypothesis to many contexts and finds support for this hypothesis (e.g., Pettigrew & Tropp, 2000; Pettigrew et al., 2011), which makes sense because to interact enough with a person is to get to know them as a unique person. Indeed, a meta-analysis of over 500 research studies that test the contact theory finds that intergroup contact can reduce prejudice and encourage more positive outcomes (Pettigrew et al., 2011).

Gordon Allport was not only concerned about emphasizing the uniqueness of individuals while also understanding how people's values cohere with one another's; he was also invested in empirical investigation of the unique and different patterns of values among people across cultures. In 1955, with James M. Gillipsie, Allport published a large-scale cross-cultural study on values and plans for the future. They focused on college students, who are transitioning from adolescence, when plans are being made, to adulthood, when plans are being lived out, from the United States, New Zealand, Egypt, Mexico, France, Italy, Germany, Japan, Israel, and South Africa. Some similarities of values and plans related to anchoring in their own families; a system of morality that emphasizes honesty, reliability, and integrity; and an appreciation of technological advancement. Dissimilarities, for example, arose in expectations for racial equality, with those who had been historically marginalized (e.g., Bantu, Afrikaners) being more concerned than others, and this played into their thoughts about the future, in valuation of a variety of experiences to avoid boredom (highly valued in the United States compared to other places), and desire to grow and improve one's character (highest in the European students). Modern researchers have picked up this thread to understand resiliency. In a study of South African adolescents with low family incomes in an urbanized environment who encounter many daily challenges that can undermine their well-being, researchers examined individuals' values and future plans and how those supported their resiliency (Mosavel et al., 2015). Adolescents found meaning and a buffer against the stressors of life through their connectedness to the community, feelings of hope, and investment in others. Understanding individuals' and societies' different and similar values is important to understanding personality as well as the correlates to personal and social well-being.

Family. Gordon Allport was also one of the first psychologists seeking to understand human values and personality to emphasize the great importance of religious values. Recall that religious values were one of the six he hypothesized to be relevant to people's personalities, motivations, and goals. Religious values shape many aspects of people's lives, especially how they interact with close others and family. Clinicians have argued that it is integral to consider religious values as a source of diversity in the context of therapy, especially for forgiveness and in the context of family therapy (e.g., Seedall et al., 2014). Seedall and colleagues (2014) wrote:

> Historically, religion has held a negative reputation within psychology and psychotherapy (see Ellis, 1980, for one example), leading to a sizeable disconnect between psychotherapy and the use of client religious beliefs or religiously oriented interventions to facilitate change. However, an important shift began when Allport (1966) introduced religious motivation as a potentially useful way of conceptualizing religion and religiosity beyond church attendance and membership. (p. 127, Seedal et al., 2014)

Across cultures, forgiveness is an essential part of healthy family relations, such as marriage (Bell et al., 2018), and psychological well-being (Fincham & May, 2019). Interpersonal forgiveness is also linked to religious values, practices, and beliefs about divine forgiveness (e.g., Fincham & May 2017, 2019). Accordingly, it is important to note that diversity of religion matters for forgiveness. Different religious traditions have different conceptions of and practices surrounding forgiveness. For example, people who subscribe to Catholicism can speak with a priest to ask for divine forgiveness and make amends in the formal sacrament of Reconciliation. In Islam, one of God's names is "The Most Forgiving," and seeking and giving forgiveness are important practices for Muslims. Thus, Allport's emphasis on understanding religious values to understand individuals is particularly important when exploring how diversity shapes family processes and ensuring that other people and clinical practitioners respect and build on individual's relevant beliefs.

Chapter Summary

Gordon Allport focused on the conscious instead of the unconscious. He believed that personality is guided more by the present and future than by the past. He studied psychologically well, versus distressed, individuals in order to be able to make more generalizable propositions about personality and human nature. Our ultimate goal is for increases in tension that impel us to seek new sensations and challenges.

Personality is defined as the dynamic organization within the individual of those psychophysical systems that determine characteristic behavior and thought. It is a product of heredity and environment and distinct from childhood experiences.

Traits are consistent, enduring predispositions to respond in the same or a similar way to different stimuli. Individual traits (personal dispositions) are unique to the person; common traits are shared by many people. Cardinal traits are powerful and pervasive; central traits are less pervasive. Secondary traits are displayed less conspicuously and less consistently than other types of traits.

Functional autonomy means that a motive in the normal adult is not functionally related to the past experiences in which it originally appeared. Two levels of functional autonomy are perseverative (behaviors such as addictions and repeated physical movements) and propriate (interests, values, attitudes, intentions, lifestyle, and self-image related to the core of personality). Three principles of propriate functional autonomy are organizing the energy level, mastery and competence, and propriate patterning.

The proprium (self or ego) develops from infancy to adolescence in seven stages: bodily self, self-identity, self-esteem, extension of self, self-image, self as a rational coper, and propriate striving. Then there is adulthood. The mature, psychologically well-adjusted adult personality is characterized by an extension of self to other people and activities, a warm relating to others, emotional security, a realistic perception, the development of skills, a commitment to work, self-objectifying humor, and a unifying philosophy of life.

The personal-document approach to personality assessment involves the examination of diaries, letters, and other personal records to uncover personality traits. The Study of Values is a psychological framework to assess six types of values: economic, theoretical, aesthetic, religious, political, and social interests.

Research on expressive behavior reveals a consistency in expressive facial movements and relates them to a variety of emotions and personality patterns. Some research suggests a consistency of facial expressions from one culture to another, with some differences in displays and decoding. Facial expressions communicate emotions to others, who may vary in how well they can read those expressions.

Allport's theory has been criticized on the grounds that it is difficult to test empirically such concepts as functional autonomy. Allport's focus on the uniqueness of personality and on the discontinuity between childhood and adult personalities has also been questioned.

Review Questions

1. In what ways does Allport's personality theory differ from Freud's?
2. In what ways does Allport's personality theory differ from Erikson's?
3. Define personality and explain its five characteristics according to Allport.
4. How do cardinal traits, central traits, and secondary traits differ from one another?
5. What is functional autonomy? Describe three principles that govern propriate functional autonomy.
6. Describe the concept of proprium.
7. What are the seven developmental phases according to Allport? Describe each phase in two sentences.
8. What are the characteristics of the mature, healthy, psychologically well-adjusted adult personality?
9. Define each of the six types of values according to Allport.
10. Summarize the research on expressive behavior: what expressive behavior reveals about aspects of our personality, how expressive behavior is similar and different across cultures, and how individuals may differ in their making or decoding expressions.

Suggested Readings

- Allport, G. W. (1937). *Personality: A psychological interpretation.* Holt. Allport's classic book that established the study of personality as an integral part of scientific academic psychology and defined the focus of personality psychology as the unique individual.
- Allport, G. W. (1955). *Becoming: Basic considerations for a psychology of personality.* Yale University

Press. Outlines Allport's approach to personality, emphasizing the human capacity for growth and development.

- Allport, G. W. (1967). Autobiography. In E. G. Boring & G. Lindzey (Eds.), *A history of psychology in autobiography* (Vol. *5,* pp. 1–25). Appleton-Century-Crofts. Allport's account of his life and career.
- Ekman, P., (2007). *Emotions revealed: Recognizing faces and feelings to improve communication and emotional life.* Holt.
- Ekman, P., & Friesen, W. V. (2003). *Unmasking the face: A guide to recognizing emotions from facial clues* (Vol. 10). Ishk.
- Elms, A. C. (1994). *Uncovering lives: The uneasy alliance of biography and psychology*. Oxford University Press. Chapter 5, "Allport meets Freud and the clean little boy" (pp. 71–84), discusses Gordon Allport's 1920 encounter with Sigmund Freud.
- Evans, R. I. (1971). *Gordon Allport: The man and his ideas*. Dutton. Interviews with Allport about his life and work.
- Nicholson, I. (2003). *Inventing personality: Gordon Allport and the science of selfhood.* American Psychological Association. Focuses on Allport's early career in developing his theory of personality and relates his work to the social climate of the times in America in the 1920s and 1930s.
- Rosenzweig, S., & Fisher, S. L. (1997). "Idiographic" vis-à-vis "idiodynamic" in the historical perspective of personality theory: Remembering Gordon Allport, 1897–1997. *Journal of the History of the Behavioral Sciences, 33,* 405–419. A reappraisal of Allport's focus on the uniqueness of the human personality. Considers the extent to which his personal spirituality and religious views may have affected his image of human nature.

Chapter 8

Personality is that which permits a prediction of what a person will do in a given situation. —Raymond Cattell

Raymond Cattell, Hans Eysenck, the Five-Factor Theory, HEXACO, and the Dark Triad

Learning Objectives

8.1 Compare and contrast the trait approach to personality with that of psychoanalysts and of developmental stage theories, providing three examples of similarities and differences.

8.2 Outline the different types of traits proposed by Cattell.

8.3 List the six stages of development in Cattell's framework.

8.4 Describe (a) the methods of and (b) and the type of information produced by behavioral genetic research.

8.5 Define each of the three traits in Eysenck's PEN personality model.

8.6 Compare and contrast the Big Five/Five-Factor Model of personality to the PEN model.

8.7 Identify three outcomes associated with each of the Big Five traits.

8.8 Describe each of the three Dark Triad traits.

8.9 Summarize the trait view of personality in five sentences.

Predicting Behavior

Cattell's goal in his study of personality was to predict how a person will behave in response to a given stimulus situation. Cattell was not interested in changing or modifying behavior from abnormal to normal, which had been the approach of other personality theorists.

Those more clinically-oriented theorists based their work on case studies of patients who experienced symptoms of neurosis or psychosis and wanted to change. In contrast, Cattell studied people without psychological symptoms or distress. His aim was to study their personality, not to treat it. He believed it was impossible, or at least unwise, to attempt to change a personality before understanding fully what was to be modified.

A Scientific Approach

Cattell's approach to personality was rigorously scientific, relying on observations of behavior and masses of data. In his research, it was not unusual for people to respond to more than 50 kinds of measurements. "His theory of personality [was] rivaled by no other in its comprehensiveness and adherence to evidence derived from empirical research" (Horn, 2001, p. 72).

Factor Analysis

The hallmark of Cattell's approach was his analysis of the data. He submitted them to the statistical procedure called **factor analysis**, which involves assessing the relationship among measurement items to which many participants responded to determine common, underlying factors. Put another way, factor analysis allows researchers to understand whether and which measurement items tap into the same construct or different constructs by providing "factor loadings" (which can be viewed as akin to correlations) onto those "latent" (or underlying) factors. For example, factor analysis helps answer the question, *Are the following three items measuring the same personality construct? To what extent do the following describe you? . . .*

1. worries a lot
2. gets nervous easily
3. is talkative
4. is outgoing, sociable
5. remains calm in tense situations

You likely noticed that the first two and last items measure related things—neuroticism and emotional stability (which are inversely related and capture the same thing)—and that the third and fourth items might be more related to extraversion (Lang et al., 2011; Hahn et al., 2012.) Factor analyses can test those assumptions to see if the items meant to capture the same traits are related and load onto the same factors. Based on theory and predictions as well as what items load onto what factors, the researcher must interpret what the underlying factors, or constructs being measured, are.

Personality Traits

Cattell referred to these factors as *traits*, which he defined as the mental elements of the personality. Only when we know someone's traits can we predict how that person will behave in a given situation. Thus, to be able to understand someone fully, we must be able to describe in precise terms the entire pattern of traits that define that person as an individual.

The Life of Cattell (1905–1998)

An Older Brother and Wounded Soldiers

Cattell was born in Staffordshire, England. His parents had high, exacting standards of behavior for their children but were also permissive about how the children spent their spare time. Cattell, his brothers, and friends spent much time outdoors, sailing and swimming, exploring caves, and fighting mock battles.

Cattell's life changed dramatically at the age of 9, when England entered World War I. A nearby mansion was converted to a hospital, and he saw trainloads of wounded soldiers returning from the battlefields of France. He wrote that this experience made him unusually serious for a young boy and aware of the "brevity of life and the need to accomplish while one might." He also felt highly competitive with an older brother and wrote of the problems of maintaining his own freedom of development while confronted with this brother who could not be "overcome" (1974a, pp. 62–63).

Psychology: A Bad Choice

At age 16, Cattell enrolled at the University of London to study physics and chemistry, graduating with honors in three years. His time in London intensified his interest in social problems, and he came to realize that the physical sciences did not equip him to deal with social phenomena. He decided that the best solution was to study the human mind.

That was a courageous decision to make in 1924 because the field of psychology in England offered few professional opportunities and only six academic professorships in the entire country. It was regarded as a discipline for eccentric people. Against the advice of friends, Cattell began graduate studies at the University of London, working with the eminent psychologist-statistician Charles E. Spearman, who had developed the technique of correlations and factor analysis.

Awarded his PhD in 1929, Cattell found that his friends were right. There were very few jobs for psychologists. He did some lecturing at Exeter University, wrote a book about the English countryside, and set

factor analysis A statistical technique that assesses whether and to what extent multiple measurement items relate to an underlying factor such as a personality construct.

up a psychology clinic for the schools in the city of Leicester, all while pursuing his own research interests. Whereas Spearman had used factor analysis to measure cognitive abilities, Cattell resolved to apply the method to the structure of personality.

A Time of Hardship

During this period, Cattell developed chronic digestive disorders from overwork, a deficient diet, and living in a cold basement apartment, which is what he could afford. His wife left him due to his poor economic prospects and absorption in his work. However, Cattell did claim some positive benefits from that time.

The experience forced him to focus on practical problems rather than theoretical or experimental issues, which he might have done given more secure and comfortable circumstances: "Those years made me as canny and distrustful as a squirrel who has known a long winter. It bred asceticism and impatience with irrelevance, to the point of ruthlessness" (Cattell, 1974b, p. 90).

Success in America

Eight years after he earned his doctoral degree, Cattell finally received an opportunity to work full-time in his chosen field. The prominent American psychologist Edward L. Thorndike invited Cattell to spend a year at Thorndike's laboratory at Columbia University in New York. The following year, Cattell accepted a professorship at Clark University in Worcester, Massachusetts, and in 1941 moved to Harvard, where, he said, the "sap of creativity" rose (Cattell, 1974a, p. 71).

His colleagues included Gordon Allport and William Sheldon, who was then developing his theory of personality and body type. Cattell married a mathematician who shared his research interests, and at the age of 40 settled at the University of Illinois as a research professor. He published more than 500 articles as well as 43 books, a monumental accomplishment that reflected the benefit of a stable position as well as his dedication and perseverance. He said:

> For the next twenty years, my life was that of a humming dynamo—smooth but powerful. I was generally the last out of the parking lot at midnight. There is a story that I arrived at the laboratory one day to find, to my amazement, not a soul there. I phoned [home] and was told, "We are just sitting down to Thanksgiving dinner." All days were the same to me. (Cattell, 1993, p. 105)

In his 70s, Cattell joined the graduate faculty of the University of Hawaii, where he swam in the ocean every day. It was said that he worked "as hard as an assistant professor up for tenure and not sure that it will be granted" (Johnson, 1980, p. 300).

He died in Honolulu at the age of 92, one year after he had been awarded the Gold Medal Award for Life Achievement in Psychological Science from the American Psychological Association, for his "prodigious, landmark contributions to psychology, including factor analytic mappings of the domains of personality" (Gold Medal Award, 1997, p. 797).

Cattell's Approach to Personality Traits

Cattell defined **traits** as relatively permanent reaction tendencies that are the basic structural units of the personality. He classified traits in several ways (refer to Table 8.1).

Common Traits and Unique Traits

Cattell distinguished between common traits and unique traits. A **common trait** is one that is possessed by everyone to some degree. Intelligence and extraversion are examples of common traits. Everyone has these traits, but some people have lower levels and others have higher levels. Cattell's reason for suggesting that common traits are universal is that all people have a similar hereditary potential and are subject to similar social pressures, at least within the same culture.

People differ, as we said, in that they possess different amounts or degrees of these common traits. They also differ because of their **unique traits**, those aspects of personality shared by few other people. Unique traits are particularly apparent in our interests and attitudes. For example, one person may have a consuming interest in genealogy, whereas another may be passionately interested in Civil War battles or baseball or Chinese martial arts.

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traits To Cattell, reaction tendencies that are relatively permanent parts of the personality.

common traits Traits possessed in some degree by all persons.

unique traits Traits that few people possess and make us unique.

Table 8.1 Ways of classifying traits in Cattell's Approach

Common traits	Everyone shares common traits to some degree; for example, everyone has some measure of intelligence or of extraversion.
Unique traits	Each of us has unique traits that distinguish us as individuals, which largely manifest in attitudes and interests.
Ability traits	Our skills and capacities determine how well we can work toward our goals.
Temperament traits	Our emotions and feelings (whether we are assertive, fretful, or easygoing, for example) help determine how we react to the people and situations in our environment.
Dynamic traits	The forces that underlie our motivations and drive our behavior.
Surface traits	Characteristics composed of any number of source traits, or behavioral elements; they may be unstable and impermanent, weakening or strengthening in response to different situations.
Source traits	Single, stable, permanent elements of our behavior.
Constitutional traits	Source traits that have biological origins, whether innate or some external stimulus interacting with what is innate.
Environmental-mold traits	Source traits that have environmental origins, such as the behaviors that result from the influence of our friends, work environment, or neighborhood.

Ability, Temperament, and Dynamic Traits

A second way to classify traits is to divide them into ability traits, temperament traits, and dynamic traits. **Ability traits** determine how efficiently we will be able to work toward a goal. Intelligence is an ability trait; our level of intelligence will affect the ways in which we strive for our goals. Cattell, along with psychologist John L. Horn, originally proposed that there are two types of intellectual ability that make up a broader trait of intelligence (g). One type is called *crystallized intelligence* (g-c)—all of one's knowledge, which can be measured by tests of vocabulary and general information (think Jeopardy). The other type is called *fluid intelligence* (g-f)—one's ability to problem solve; the mental processes that allow a person to accomplish a novel task or meet a novel challenge; and the processes used in gathering and storing crystalized intelligence. Fluid intelligence may be constituted by executive functions. Later, Cattell added other types of intelligence, such as visual intelligence (g-v), which allows for dealing with visuospatial information.

As another example, research has identified self-confidence as an ability trait (Burns et al., 2016). When confidence about cognitive performance is measured with regard to the cognitive task, the self-confidence construct provides unique data about an individual and their performance beyond the constructs of self-efficacy and other measures of personality. Another example is metacognition—the ability to reflect on your own thoughts and cognitive performance—which supports peoples' abilities to pursue their goals. This was evidenced in a study of nearly 700 middle and high school students in Brazil that found metacognition supported students' general academic achievement (Gomes et al., 2014).

Ground Picture/Shutterstock.com

Across development, whether and how we reach our goals and succeed will depend on what Cattell called ability traits.

ability traits Traits that describe our skills and how efficiently we will be able to work toward our goals.

Temperament traits describe the general style and emotional tone of our behavior; for example, how assertive, easygoing, or irritable we are. These traits affect the ways we act and react to situations. Modern personality research on temperament traits has used the Inventory of Adult Temperament Styles (IATS; Oakland & Wechsler, 2012). In a study of Brazilian adults, temperament styles were captured in constructs with two endpoints, such as Extroversion–Introversion, Practical–Imaginative, Thinking–Feeling, and Organized–Flexible (Wechsler et al., 2018). These ways of feeling and reacting to the environment were associated with the some of the Big Five personality traits (discussed later in the chapter): For example, people high on thinking, and therefore lower on feeling, were higher in conscientiousness and agreeableness, and people high on flexibility (vs. organized) and imaginative (vs. practical) were also higher in openness to experience.

Dynamic traits are the driving forces of behavior. They define our motivations, interests, and ambitions. Such traits can be thought about as defining the content of our goals and push us toward behaving in ways consistent with those goals. Cattell proposed three types of dynamic traits. Attitudes, according to Cattell, are the combination of many motivations that give rise to desire to act in particular ways. Ergs are innate drives or instincts, including sex, hunger, curiosity, protectiveness, self-assertion, gregariousness, and curiosity. Sems, or sentiments, are learned dynamic traits that help accomplish multiple ergs simultaneously—for instance, self-sentiment. Modern research with over 800 U.S. adults from ages 21 to 74 in a twin study has examined how interests cluster, finding that people vary in interests across the following domains: Domestic–Manual, Investigative–Scientific, Artistic–Creative, Social–Educational, Hedonistic–Enterprising, Cultural–Intellectual, Technical–Logistic (Kandler et al., 2011). Such interests were also associated with personality traits of extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience (further discussed below). For example, people with strong investigative–scientific interests were also higher in openness to new experiences, and people with strong hedonistic–enterprising interests were also higher in extraversion. Importantly, both the participants and observers (e.g., friends and spouses) responded to the measures used, such that results may be less biased by concerns about social desirability.

In a study of what sort of traits predicted academic and job performance, researchers measured what Cattell would classify as ability traits (i.e., verbal, numerical, and spatial abilities), temperament traits (e.g., extraversion, agreeableness), and dynamic traits (e.g., motivations, decision-making strategies) (Kanfer et al., 2010). They found that ability traits, personality oriented toward others (temperament traits), and learning and mastery motivation (dynamic traits) each uniquely positively predicted grade-point average (GPA).

Surface Traits and Source Traits

A third class of traits is surface traits versus source traits according to their stability and permanence. **Surface traits** are personality characteristics that correlate with one another but do not constitute a factor, because they are not determined by a single source. For example, several behavioral elements such as anxiety, indecision, and irrational fear combine to form the surface trait labeled neuroticism. Thus, neuroticism does not derive from a single source. Because surface traits are composed of several elements, they are less stable and permanent and, therefore, less important in describing personality, according to Cattell.

Of greater importance are **source traits**, which are unitary personality factors that are much more stable and permanent. Each source trait gives rise to some aspect of behavior. Source traits are those individual factors derived from factor analysis that combine to account for surface traits.

After more than two decades of intensive factor-analytic research, Cattell (1965) identified 16 source traits as the basic factors of personality. These factors are best known in the form in which they are most often used, in a self-report personality measure called the Sixteen Personality Factor (16 PF) Questionnaire (refer to Table 8.2).

As you can see from Table 8.2, the personality characteristics associated with these traits are expressed in words we use in our everyday conversation when describing other people and ourselves. No doubt you can tell at a glance whether you score high, low, or somewhere in between on these basic personality factors.

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temperament traits Traits that describe our general behavioral style in responding to our environment.

dynamic traits Traits that describe our motivations and interests.

surface traits Traits that show a correlation but do not constitute a factor because they are not determined by a single source.

source traits Stable and permanent traits that are the basic factors of personality, derived by the method of factor analysis.

Table 8.2 Cattell's source traits (factors) of personality

Factor	Low Scorers	High Scorers
A. Warmth	Reserved, aloof, detached	Outgoing, warmhearted, easygoing
B. Intellect	Low in intelligence	High in intelligence
C. Emotional Stability	Low ego strength, easily upset, less emotionally stable	High ego strength, calm, emotionally stable
E. Dominance	Submissive, obedient, docile, unsure, meek	Dominant, assertive, forceful
F. Liveliness	Serious, sober, depressed, worrying	Happy-go-lucky, enthusiastic, cheerful
G. Conscientious	Expedient, low in superego	Conscientious, high in superego
H. Social Boldness	Timid, shy, aloof, restrained	Bold, adventurous
I. Sensitivity	Tough-minded, self-reliant, demanding	Tender-minded, sensitive, dependent
L. Paranoia	Trusting, understanding, accepting	Suspicious, jealous, withdrawn
M. Abstractness	Practical, down-to-earth, concerned with detail	Imaginative, absentminded
N. Introversion	Forthright, naive, unpretentious	Private, worldly, insightful
O. Apprehension	Self-assured, secure, complacent	Apprehensive, insecure, self-reproaching
Q_1. Openness to Change	Conservative, holds traditional values, dislikes change	Radical, liberal, experimenting, embraces change
Q_2. Self-Reliance	Group-dependent, prefers to join and follow others	Self-sufficient, resourceful, independent
Q_3. Control	Uncontrolled, lax, impulsive	Controlled, compulsive, exacting
Q_4. Tension	Relaxed, tranquil, composed	Tense, driven, fretful

Pause for Reflection

Do you think that any of Cattell's traits are overlapping and could be combined? Do you think there are any traits missing?

Research with the Sixteen Personality Factor (16 PF) Questionnaire

Let us consider research by Cattell and his associates as well as by others using Cattell's personality measure. Note that different researchers use different names for some of the 16 factors. Personality is so important because it not only allows us to understand the characteristic thoughts, feelings, and everyday behaviors of ourselves and people around us, but it also helps us predict opportunities, outcomes, and successes.

For example, Cattell used the 16 PF Test to understand how personality might contribute to romantic relationship maintenance (Cattell & Nesselroade, 1967). In that study, participants were married couples identified as having either a stable or an unstable marriage. The criterion for (in)stability was whether a couple had taken steps toward dissolving the marriage. Partners in stable marriages had similar personality traits, whereas partners in unstable marriages showed highly different personality traits, suggesting that personality similarity is an important factor in whether a couple stays together. This and other relationship functioning differences by personality may be linked to specific social perception processes. For example, women who scored low in anxiety and tension and high in emotional stability were especially skilled at identifying novel individuals' faces (Megreya & Bindemann, 2013). Researchers have also studied how personalities differ across academic fields using Cattell's measure. In a study of U.S. college students, psychology, marketing, and accounting majors differed in how outgoing, creative, assertive, restrained, adventurous, tough-minded, imaginative, conservative, and controlled they were (Noël et al., 2016). Some specific differences include that psychology students were more creative and imaginative on average than marketing and accounting students.

Researchers have been interested in what personality profiles using Cattell's measure support success in grueling sport competitions as well. For example, in a study of women basketball players trying out for the Paralympics, the women who made the team tended to be higher on tough-mindedness and lower in anxiety than women who did not make the team (Martin et al., 2011). Another study with fencers in Russia found that more

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Cattell's personality factors help distinguish successful from unsuccessful athletes, including in fencing.

successful athletes were higher in intelligence, emotional stability, emotional hardness, confidence, and independence and autonomy (Kolosov et al., 2019).

The scale has also been translated into many languages for use across the globe, including, for example, Greek (Roussi-Vergou et al., 2009; Roussi-Vergou & Zafiropoulou, 2011), Turkish (Aksu et al., 2010), and Chinese (Cattell et al., 1970; Zhu & Dai, 1988).

The 16 PF was used in research that aimed to understand how Chinese calligraphy handwriting practice might impact personality (Kao et al., 2021). In a sample of over 1,200 children and adults, those with more calligraphy experience tended to be more emotionally stable, humble, self-sufficient, controlled, and conscientious.

In a study of Chinese peacekeepers, military personnel, and medical workers in a crisis zone in Lebanon, researchers sought to understand how personality differed based on role (Yu et al., 2012). They found that compared to military personnel and medical workers, peacekeepers were lower in social boldness, warmth, and abstractedness, which may be adaptive given the tasks of their roles. In another study, researchers studied how employees' roles at a 5-star hotel in Turkey related to personality (Aksu et al., 2010). There were significant differences in the personality traits of warmth, reasoning, emotional stability, dominance, social boldness, apprehension, and tension based on whether people worked, for example, in housekeeping, marketing, or the kitchen, in ways you might expect.

There have been studies of gender differences in personality using the 16 PF Questionnaire. For example, the previously mentioned study done in Turkey also examined how gender related to personality (Asku et al., 2010). Women tended to be higher in sensitivity and self-reliance and lower in dominance and concientiousness than men. In a study of over 21,000 U.S. participants, researchers found that women were higher than men in warmth, sensitivity, complexity, and anxiety, and men were higher than women in emotional stability, social assertiveness, dutifulness, and reserve.

Cattell later identified additional factors he designated as *temperament traits* because they relate to the general style and emotional tone of behavior. He gave as examples excitability, zest, self-discipline, politeness, and self-assurance (Cattell, 1973; Cattell & Kline, 1977). Of course, like other self-report measures, response patterns and results can differ if people are trying to make their personalities seem more desirable, as evidenced by research with college students, incarcerated individuals, and people with substance abuse issues (Simon, 2007).

It is important to remember that in Cattell's system, source traits are the basic elements of personality just as atoms are the basic units of the physical world. He argued that psychologists cannot understand or generate laws about personality without describing precisely the nature of these elements.

Research on Source and Surface Traits

Much research over the years has explored both types of traits via other measures (see Kandler et al., 2014). You can think about source (or core) traits as consistent patterns of thoughts, feelings, and behavior across situations and over time (how we generally define personality), whereas surface traits are more related to "specific cognitive, motivational and affective features of psychological individuality, such as attitudes, values, motives, goals or positive and negative affect" (p. 233, Kandler et al., 2014). For example, understood as a more complex trait beyond the basic one Cattell proposed, perfectionism (synonym for controlled) may be a surface trait to which multiple, more basic dimensions and source traits contribute. In a study with over 500 Brazilian adults, perfectionism was measured with a multidimensional scale that captured constituent traits of perfectionism, including high standards, discrepancy (perceptions about one's failure to meet one's high standards), and order (tendency to be organized and disciplined). Personality was assessed with a measure of the Big Five (discussed later in the chapter), neuroticism, extraversion, openness, conscientiousness, and agreeableness (dos Reis Soares et al., 2020). Researchers found that higher standards were associated with higher conscientiousness and openness, higher discrepancy was

associated with higher neuroticism, and higher order was associated with higher conscientiousness.

But the distinction between surface and source traits in terms of, for example, permanence, may not be as clear as Cattell proposed. Modern researchers (Kandler et al., 2014) reviewed the scientific literature on surface and source (or core) traits to assess whether surface traits are indeed less stable and permanent than source traits. They focused on surface traits in the domains of self-related schemata, attitudes/values/beliefs, and personal strivings, compared these surface traits to source traits, and analyzed them according to four criteria: (1) level of stability in individual differences, (2) level of heritability, (3) direction of causation, and (4) shared genetic variance. Citing many studies, the researchers conclude that overall, research suggests that it is hard to distinguish what have been considered source and surface traits in terms of their criteria (e.g., stability and heritability). Instead, they argue, the surface category may include only some self-related schema (e.g., self-esteem) given that environmental inputs may shape them, and they may be manifestations of source traits such as extraversion and conscientiousness. They also consider neuroticism to be a source, not surface, trait. However, attitudes/values/beliefs and personal strivings appear to be just as stable and heritable as source traits, and it does not seem that source traits add up to cause surface traits as Cattell theorized.

Constitutional Traits and Environmental-Mold Traits

Source traits are classified by their origin as either constitutional traits or environmental-mold traits. **Constitutional traits** originate in or result from interactions with innate biological conditions. For example, alcohol or drug use can lead to behaviors such as carelessness, talkativeness, and slurred speech.

As another example, some people experience more pronounced physiological stress or fear responses to stimuli than others, and if this is evoked often, that person will evince a pattern of neuroticism at higher levels than others—that is, neuroticism is associated with unique neural and physiological responding (e.g., Evans et al., 2016; Wang et al., 2018). Physiological responses work in accord to how biology, namely genes, codes them to. Indeed, a combined meta-analysis of genome-wide association study (GWAS) that includes 91,370 participants from the United Kingdom, 6,659 participants from Scotland, and 8,687 participants from Australia found that certain genes were associated with neuroticism (Smith et al., 2016).

But there can also be patterns of thoughts, feelings, and behaviors appearing like traits that are due to biology but that we might not consider true personality. For example, people vary in how strong their senses are and how much stimuli from the outside world affect them through their nervous systems. Such differences are biological and shape what we might consider personality traits. Take, for example, how much an individual sweats. For someone who sweats a lot, whether because they have a biological predisposition or because they are in an especially hot environment, they may avoid going outside when they are dressed up for work. That avoidance strategy may lead to their declining to go on walks with their coworkers during breaks. Such a pattern of behavior could be described as introverted or lazy, but the reason is constitutional.

Environmental-mold traits derive from influences in our social and physical environments. These traits are learned characteristics and behaviors that impose a pattern on the personality. The behavior of a person who grew up in a close-knit but low socioeconomic family has different experiences that shape personality than a person whose family had wealth but did not spend a lot of time together, for example. Thus, we see that Cattell recognized the interaction between personal and situational variables.

In the research focusing on perfectionism cited previously, an environmental molding effect was found for the discrepancy dimension (dos Reis Soares et al., 2020). Specifically, people who experienced overprotective mothers tended to be higher in discrepancy, that is, they felt they failed to meet their high standards of perfectionism in life. Another example of an environmental-mold trait is aggression. Research has found that U.S. men who experience pressure to behave stereotypically masculine—to "be a man"—are more likely to respond with aggressive thoughts when their gender identity is challenged (Stanaland & Gaither, 2021).

Academic studies serve as an environment that molds personality. In China, a longitudinal study with almost 900 college students across the Faculties of Plant Science, Animal Science, Biology and Environment, Food and Engineering, and Social Science departments found that although there was not much personality change in the first year of college, second and third years made

constitutional traits Source traits that depend on biological or physiological process, whether purely internal or affected by external factors.

environmental-mold traits Source traits that are learned from social and environmental interactions.

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Personality affects the choices we make in terms of field of study and occupation, but field of study and occupation also affect personality.

an impact (Wen et al., 2021). Specifically, in their senior year, students who studied agriculture-related majors were more shy and less socially communicative than those who studied non-agricultural-related majors. The authors suggest that different training models and curricula across the majors as well as cultural views of (i.e., "bias against") those in agricultural careers contribute to this pattern.

The Influences of Heredity and Environment

Cattell showed great interest in the relative influences of heredity and environment in shaping personality. He investigated the importance of hereditary and environmental factors by statistically comparing similarities found between twins reared in the same family, twins reared apart, non-twin siblings reared in the same family, and non-twin siblings reared apart. Thus, he was able to estimate the extent to which differences in traits could be attributed to genetic or to environmental influences via behavioral genetics research. We will discuss this type of research study more later in the chapter. Basically, though, the more similar in personality twins who grew up in different homes were, the more that personality traits could be attributed to genes, or heredity. Monozygotic (MZ) twins are twins that came from one egg and are therefore genetically identical. In contrast, fraternal twins come from two eggs (dizygotic, DZ) and are therefore genetically less similar than identical twins but as similar as regular genetic siblings. The more similar MZ twins are to each other in a personality trait compared to DZ twins, the more that trait can be attributed to genetics or heredity. Alternatively, if the personality trait level of two twins who grew up in different homes is very different, that suggests that the environment plays a bigger role. Thus, using twin studies, Cattell was able to estimate the extent to which differences in traits could be attributed to genetic or to environmental influences.

The results of his analyses showed that for some traits, heredity plays a major role. For example, Cattell's data suggest that 80 percent of intelligence and 80 percent of social boldness can be accounted for by genetic factors.

From a factor analysis of 16 PF Test data from 3,000 boys and adolescents ages 12 to 18, Cattell (1982) concluded that three of the source traits were determined primarily by heredity. These source traits are liveliness, sensitivity, and controlled. Three other traits were found to be determined primarily by environmental influences: dominance, conscientious, and tense.

Recent research backs some of this up. A twin study of over 800 American children in third to eighth grade suggested that intelligence has a strong genetic component, which may also underlie specific constituents of executive functioning such as in inhibition, switching, working memory, and updating domains (Engelhardt et al., 2016). In another analysis using that same data set of American twins, researchers found that a mixture of openness and conscientiousness as well as multiple measures of verbal knowledge and academic achievement were genetically influenced (Tucker-Drob et al., 2016). Cattell concluded that overall, one-third of our personality is genetically based, and two-thirds is determined by social and environmental influences.

Stages of Personality Development

Cattell proposed six stages in the development of personality covering the entire life span (refer to Table 8.3).

Infancy

The period of infancy, from birth to age 6, is the major formative period for personality. Children are influenced by parents and siblings and by the experiences of weaning and toilet training. Social attitudes develop along with the ego and the superego, feelings of security or insecurity, attitudes toward authority, and a possible tendency for neuroticism. Cattell was not a follower of Freud's, but he incorporated several Freudian ideas

Table 8.3 Cattell's stages of personality development

Stage	Age	Development
Infancy	Birth to 6	Weaning; toilet training; formation of ego, superego, and social attitudes
Childhood	6–14	Independence from parents and identification with peers
Adolescence	14–23	Conflicts about independence, self-assertion, and sex
Maturity	24–50	Satisfaction with career, marriage, and family
Late maturity	50–65	Personality changes in response to physical and social circumstances
Old age	65+	Adjustment to loss of friends, career, and status

into his theory; namely, that the early years of life are crucial in personality formation, and that oral and anal conflicts can affect personality. Much research supports the idea that early years of life are particularly formative (e.g., Belsky & Pluess, 2013; Ellis et al., 2009; Simpson et al., 2012). Cattell had developed a toy-play-based scale of intelligence for children, the Cattell Infant Intelligence Scale, but that has been criticized because it is based on how a narrow group of people believe that toys should be played with, rather than more objective correlates of intelligence (Young, 2015).

In infancy, curiosity may be important for children's collection of information about the world. In a study of curiosity in early infancy (10 months to 2 years old), some infants were especially curious in that they would look for longer at stimuli that represented physically impossible events, and this was related to how observers rated the childs' and parents' curiosity from day to day (Lee et al., 2023). For example, the more infants broadly explored their environment and the more caregivers engaged in awe-inducing activities like nature walks and museum outings with the children, the more children looked at the novel but impossible scene, presumably to learn more about it and understand it.

Childhood

Between ages 6 and 14, the childhood stage of personality formation, there are few psychological problems. This stage marks the beginning of a move toward independence from parents and an increasing identification with peers. Such independence is evident in children's planning for their future, for instance, by aspiring to pursue higher education in the future, which was related to self-esteem, as evidenced in a study with nearly 2,500 students aged 11 to 14 years old in London, England (Rothon et al., 2011)

Adolescence

The childhood stage is followed by a more troublesome and stressful stage, adolescence, ages 14 to 23. Emotional disorders and delinquency may be evident as young people experience conflicts centered on the drives for independence, self-assertion, and sex. Indeed, in the modern context, adolescents may face challenges related to one's independence from or dependence on peers, risk-taking, and sex. For example, in a study of Barbadian college students between the ages of 18 and 24, people varied in how susceptible they were to peer influence when it came to sexual risk-taking, including exposing one's body or interacting with others exposing their bodies online, sexually explicit behavior offline, and endorsement of friends' sexual content on social media (Jules et al., 2017). This is a time when people tend to graduate from high school and move away from home, to pursue a career or education. How people perceive these changes can be associated with changes in their personality. For example, when German adolescents viewed graduating from school negatively, they increased in neuroticism, whereas if they viewed graduating positively, they increased in extraversion (De Vries et al., 2021).

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Adolescence, according to Cattell, is characterized by transition to independence. This makes sense given this is the developmental phase in which people tend to move away from home.

Maturity

The fourth phase of development, maturity, lasts from approximately age 24 to 50. It is generally a productive, satisfying time in terms of career, marriage, and family situations. The personality becomes less flexible compared with earlier stages, and thus emotional stability increases. Cattell found little change in interests and attitudes during this period. For men, having a family during this time of life is associated, for example, with more stress tolerance, self-control, flexibility, and less risk tendency and radicalism (Borisenko, 2007). In a data analysis of approximately 23,000 adults from Germany and Australia, personality seems to cohere into three groupings of traits—resilient (highly emotionally stable, extraverted, open to experience, agreeable, and conscientious), undercontrolled (low on conscientiousness and agreeableness), and overcontrolled (low in extraversion, emotional stability, and openness to experience)—which seem to remain relatively stable in the maturity phase (Specht et al., 2014).

Late Maturity

Late maturity, ages 50 to 65, involves personality developments in response to physical, social, and psychological changes. Health, vigor, and physical attractiveness may decline, and the end of life may be in view. Indeed, older adults understand that their health is likely to decline during this time. Late maturity adults' self-rated health predicts coronary heart disease, diabetes, stroke, lung disease, and arthritis (Latham & Peek, 2013). During this phase, people reexamine their values and search for a new self. This period is somewhat similar to Carl Jung's view of the midlife period. In the study of adults cited previously, older adults were found to be more resilient and less undercontrolled (Specht et al., 2014).

Old Age

The final stage, old age, from 65 onward, involves adjustments to different kinds of losses—the death of spouses, relatives, and friends; a career lost to retirement; loss of status in a culture that values youth; and a pervasive sense of loneliness and insecurity. Indeed, a study of almost 900 older adults in Germany found that, on average, people become less happy and satisfied with their health at this time (Gerstorf et al., 2018). In a six-year longitudinal study with adults of old age in England, those who felt loneliest at the beginning of the six years had more difficulty walking and with daily activities toward the end of that time (Shankar et al., 2017). But they also found some buffering effects: People who felt they had more control over their lives and those with a living partner were happier and more satisfied during this end-of-life phase. Having a living spouse was bittersweet, though, in that those individuals also felt more fear and sadness. Other work suggests that losing a loved one that you have been taking care of can lead to depressive symptoms, a decrease in well-being, and rumination, but that resolving regrets with that person can attenuate (weaken) those negative effects. Indeed, older age was actually associated with likelihood of resolving regrets: The oldest people in the study tended to deal with their regrets in a healthy way (Torges et al., 2008).

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According to Cattell, old age is a stage that requires adjustment to loss.

Pause for Reflection

How do these stages of lifespan development compare to others we've reviewed in this text?

Assessment in Cattell's Theory

Cattell's research on personality employed three types of measures, which he called L-data (life records), Q-data (questionnaires), and T-data (tests).

Life Records (L-data)

The **L-data** technique involves observers' ratings of specific behaviors exhibited by people in real-life settings such as a classroom or office. For example, observers might record frequency of absence

L-data Records or ratings of behaviors observed in real-life situations, such as the classroom or office.

from work, grades at school, conscientiousness in performing job duties, emotional stability on the soccer field, or sociability in the office.

The important point about L-data is that they involve overt behaviors that can be seen by an observer and occur in a naturalistic setting rather than in the artificial situation of a psychology laboratory.

Questionnaires (Q-data)

The **Q-data** technique relies on questionnaires. Whereas the L-data technique calls for observers to rate the subjects, the Q-data technique requires them to rate themselves. Cattell recognized the limitations of Q-data. First, some people may have only superficial self-awareness, so their answers will not reflect the true nature of their personality.

Second, even if they do know themselves well, they may not want researchers to know certain things about themselves, such that they answer in socially desirable but somewhat dishonest ways. Thus, Cattell warned that Q-data may be biased and not completely accurate.

Personality Tests (T-data)

The **T-data** technique involves the use of what Cattell called "objective" tests, in which a person responds without knowing what aspect of behavior is being evaluated. These tests circumvent the Q-data's shortcomings by making it difficult for a subject to know precisely what a test is measuring.

If you cannot guess what the experimenter is trying to find out, then you cannot distort your responses to conceal your traits. For example, if you were shown an inkblot, you probably would not be able to predict whether the researcher's interpretation of your response revealed that you were conservative, relaxed, adventurous, or apprehensive.

Cattell considered tests such as the Rorschach, the Thematic Apperception Test, and the word-association test to be *objective* because they are resistant to faking. However, it is important to note that to most psychologists, this use of the word *objective* is misleading; such tests are usually called *subjective* because of the biases that affect scoring and interpretation.

Strong research on personality will employ a combination of these types of measures. For example, in a study of what characteristics of graduate students predicted being a leader in STEM (science, technology, engineering, math) 25 years later, researchers collected L-data (e.g., whether students had participated in gifted programs, Advanced Placement [AP] courses, or grade skipping) and Q-data (e.g., on personality, interests, values, attitudes toward work). They found that leaders in academic STEM were more self-confident, dominant, cooperative, and reliable in their orientation toward work and valued the theoretical more than did nonleaders (McCabe et al., 2020). In a longitudinal study of German and Luxembourgian children's traits and experiences of feelings and well-being across the school years, researchers interviewed children and administered creativity and intelligence measure (Krampen, 2013). As the children transition to elementary school from younger grades, they experience less well-being and self-esteem, named "transition shock," but this was not strongly associated with student creativity. Some researchers cleverly use Q-data and T-data to understand the consistency of people's personality across measures. For example, in a study with nearly 4,000 Spanish college students, researchers found personality consistency across a questionnaire on emotional adjustment and an "objective test" called the Thoroughness Test (TT), which is a task-based assessment of people's thoroughness in identifying and marking a series of objects according to a target (Rubio et al., 2011).

Research on Cattell's Theory

In discussing research methods, Cattell listed three ways to study personality: bivariate, clinical, and multivariate approaches.

The Bivariate Approach

To Cattell, the bivariate, or two-variable, approach is the standard laboratory experimental method. The psychologist manipulates the independent variable to determine its effect on the subjects' thoughts, feelings, or behavior (the dependent variable). (This approach has also been called *univariate* because only one variable is studied at a time. You might also learn about a bivariate association, which is the relationship between two variables, such as a correlation or regression coefficient.)

Bivariate research is scientific, rigorous, and quantitative, but Cattell argued that it dealt with only limited aspects of personality. In reality, personality is affected by many interacting variables. Also, in the typical laboratory situation, experimenters are somewhat limited in creating highly lifelike experiences, as another

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Q-data Self-report questionnaire ratings of our characteristics, attitudes, and interests.

T-data Data derived from personality tests that are resistant to deliberately biased responding.

example of this approach's limitation. Alternatively, though, researchers can *measure* two variables (rather than manipulate one) to assess the extent to which they are related in ways that do not require manipulation. For example, as described in the section on the 16PF, in assessing the relationship between Chinese calligraphy practice and personality, researchers asked people to report both their calligraphy practice and their personality and examined bivariate associations between the two (Kao et al., 2021). Of course, this lacks the tight control of an experiment (study with manipulation and control group) that allows for claims about causality. In another study building on Cattell's theory about ability traits, researchers analyzed cognitive ability and school achievement longitudinally in almost 700 children (Ferrer & McArdle, 2004). They found that fluid intelligence was associated with changes in quantitative ability and general academic knowledge later in childhood.

The Clinical Approach

The clinical approach, which includes case studies, dream analysis, free association, and similar techniques, is highly subjective, as noted in Chapters 2 and 5. These methods do not yield verifiable and quantifiable data. Cattell wrote, "The clinician has his heart in the right place, but perhaps we may say that he remains a little fuzzy in his head" (Cattell, 1959, p. 45). However, modern dream analyses allow for more systematic research. For example, researchers have investigated whether individual differences in dreaming about what was recently learned is associated with certain ability traits (Fogel et al., 2018). They found that after a spatial task (e.g., maze navigation) or a motor memory task (e.g., tennis simulator), people who described more richly dreaming about their experience of the task during a daytime nap also displayed higher ability in reasoning.

The Multivariate Approach

Cattell chose to study personality through the multivariate approach, which yields highly specific data. It involves the sophisticated statistical procedure of factor analysis. Cattell favored two forms of factor analysis: the R technique and the P technique.

The R technique involves collecting large amounts of data from a group of people—the standard modern approach. Correlations among all the scores are made to determine personality factors or traits. The P technique involves collecting a large amount of data from a single subject over a long period—an individualized longitudinal design. The best designs combine both. For example, one study on family factors, interests, and intelligence followed over 11,000 Americans longitudinally (Ganzach, 2021). That study found that fluid intelligence worked in concert with people's educational aspirations, gender, and parents' education to predict crystalized intelligence. In a longitudinal study of personality and knowledge in over 1,600 German adults (ages 18 to 70), researchers found that the more open to experience people were, the more knowledge they had, but there were not age-related differences in level or structure of knowledge (Watrin et al., 2022).

Pause for Reflection

What do you think are the strengths and weakness of the different measures and approaches that Cattell and subsequent researchers employ?

Questions About Human Nature

Cattell's definition of personality gives us clues about his view of human nature. He wrote, "Personality is that which permits a prediction of what a person will do in a given situation" (Cattell, 1950, p. 2). For behavior to be considered predictable, it must be lawful and orderly. Prediction would be difficult without regularity and consistency in the personality.

For example, a romantic partner can usually predict with considerable accuracy what their partner will do in a given situation because that person's past behavior has been consistent and orderly. Therefore, Cattell's view of human nature admits little spontaneity because that would make predictability more difficult. On the free will versus determinism issue, then, Cattell falls more on the side of determinism.

Cattell did not propose any ultimate or necessary goal that dominates behavior, no drive for self-actualization to pull us toward the future, no psychosexual conflicts to push us from the past. Although he noted the impact of early life events, he did not believe that childhood forces determine personality permanently.

Cattell accepted the influence on personality of both nature and nurture. For example, constitutional traits are biological (innate or interacting with what is innate), whereas environmental-mold traits are learned or responses to the environment. On the uniqueness versus universality issue, Cattell took a moderate position, noting the existence of common traits, which

apply to everyone in a culture, and unique traits, which describe the individual.

Cattell's personal view of human nature is clearer. In his younger years, he was optimistic about our ability to solve social problems. He predicted that we would gain greater awareness of and control over our environment. He expected to observe the level of intelligence rise, along with the development of "a more gracious community life of creatively occupied citizens" (1974b, p. 88). Reality did not live up to his expectations, however, and eventually he came to believe that human nature and society had regressed.

Reflections on Cattell's Theory

Despite Cattell's legitimate claim that factor analysis is an objective, precise technique, critics argue that the opportunity exists for subjectivity to affect the outcome. At several stages in the research process, decisions are required that may be influenced by personal preferences.

In the initial step of data collection, researchers must decide which measures to use and what aspects of personality to focus on. They must then determine which factor-analytic technique to apply and what level of statistical significance will be accepted as appropriate.

Once the factors, or traits, have been identified, the researcher labels them. If these names are ambiguous in any way, they may not accurately express the nature of the factors. This criticism does not suggest inherent weaknesses in Cattell's theory but that there is potential for subjective error in the factor-analytic approach. Perhaps it is this very subjectivity that accounts for the difficulty other researchers have in replicating Cattell's findings and confirming his 16 basic source traits.

Cattell understood his failure to persuade other psychologists of the wisdom of his views and defended his approach as the only one of value for studying personality. At the age of 85, he reiterated this point, criticizing contemporary psychologists for failing to master and apply factor analysis and lamenting that his work remained isolated from the mainstream of personality theorizing. He remained convinced that one day his work would allow for the prediction of human behavior with the same degree of accuracy with which astronomers predict the movements of planets (1974a, 1974b, 1993).

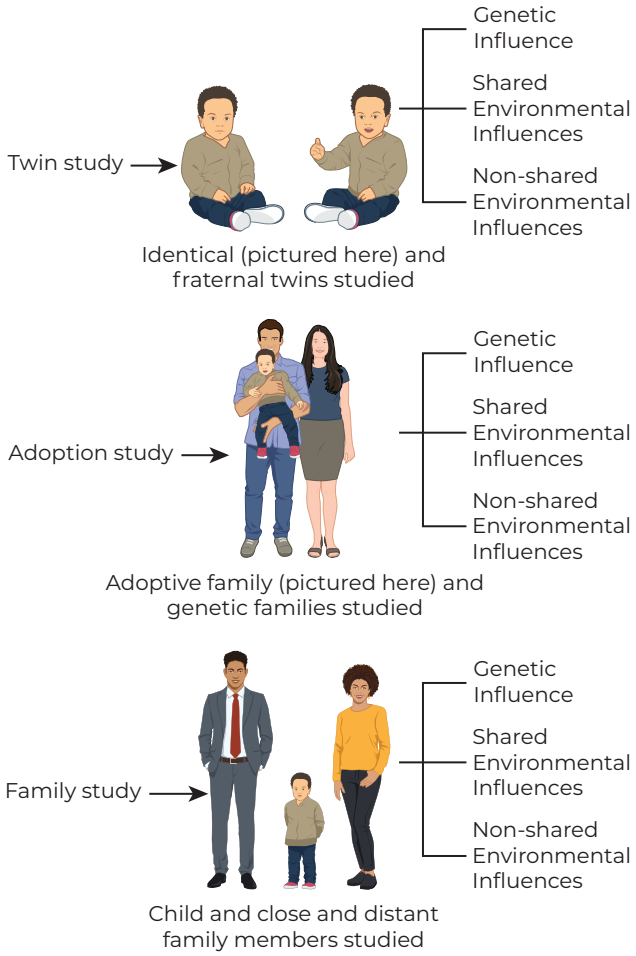
The consensus of current opinion among personality psychologists affirms Cattell's belief in the value of his approach. He is generally considered to be not only the father of the personality trait approach but also one of the 20th century's most influential psychologists (see Denis, 2009; Revelle, 2009; Tucker, 2009). Whatever the eventual outcome of Cattell's specific proposals, it is clear that the trait approach to personality and the investigation of genetic influences, which he initiated, continue to fascinate contemporary researchers, as we shall learn throughout the rest of this chapter.

Pause for Reflection

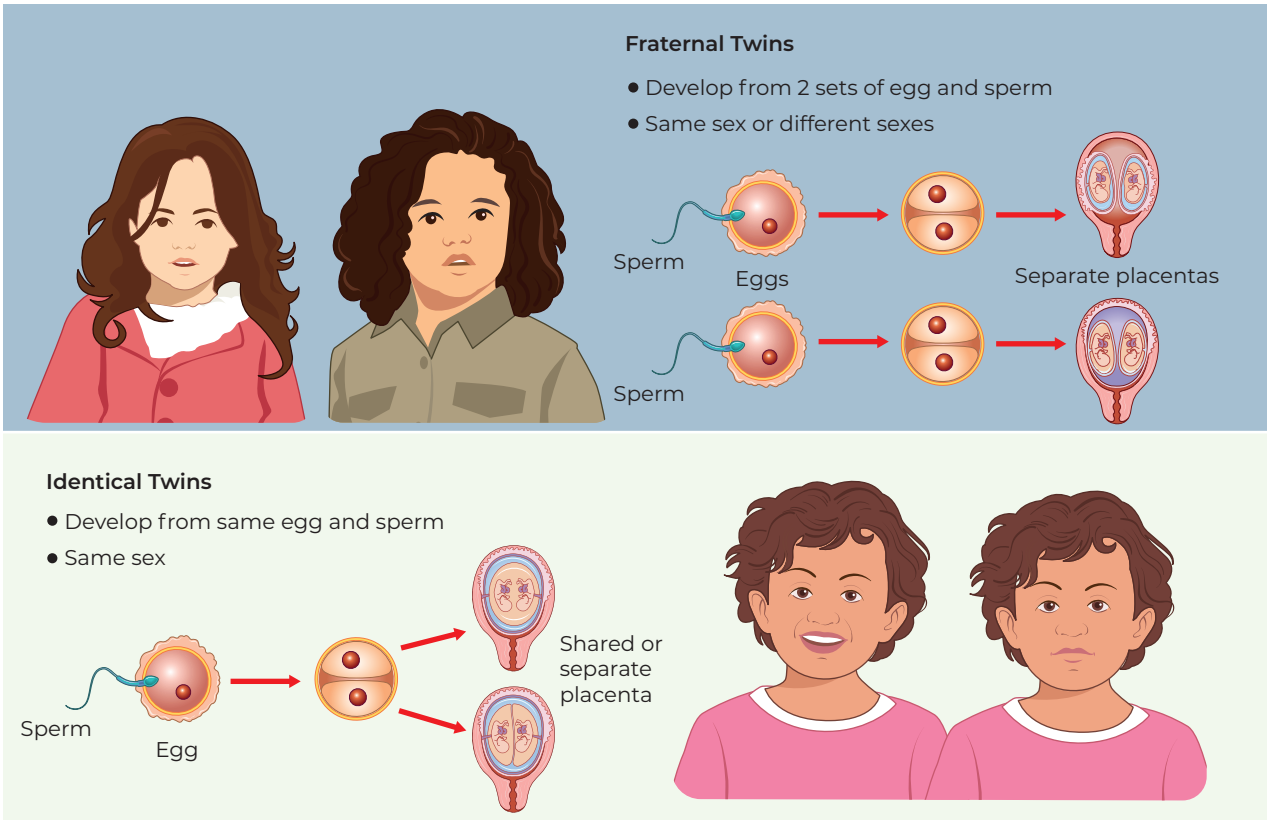
Are there other strengths or weaknesses of Cattell's theories not discussed here?

Behavioral Genetics

We have mentioned evidence to support the idea that some traits are influenced by hereditary factors.



Behavioral genetics research employs twin, adoption, and family studies to understand genetic influences (heritability) and environmental influences on traits.



How similar or different identical (MZ) and fraternal (DZ) twins are can shed light on whether personality traits are genetically-based.

The area of study focusing on the connection between genetics and personality is housed within **behavioral genetics**.

If something is **hereditary**, it is passed down from generation to generation. Personality, especially when assessed in the ways we discuss in this chapter, is hereditary (Maranges & Reynolds, 2020). Put another way, personality has a genetic basis or is coded by the genes we get from our biological parents. When a trait has a genetic basis, it is heritable. **Heritability** is the proportion of variance (differences among people) in a trait (phenotype) that can be attributed to genetics, specifically genetic variation (genetic differences among people). Therefore, heritability lets us know whether similarities in a trait are due to similarities in genetics (i.e., genetic relatedness).

Behavioral genetics research assesses heritability as well as environmental effects and employs twin, adoption, and family studies. Twin studies work by studying traits in identical and fraternal twins because these twin pairs are similar in sharing their environment (usually, e.g., same home, neighborhood, school) but they differ in how genetically similar they are. Identical twins—or monozygotic (MZ) twins—developed from the same egg (zygote) that eventually splits into two fetuses; and, therefore they are exactly genetically 100 percent identical. In contrast, fraternal twins—or dizygotic (DZ) twins—developed from two different eggs that were fertilized by two different sperm cells, such that they are only as genetically similar as any siblings, sharing an average of 50 percent of their genes. Heritability estimates can be calculated by comparing the trait similarity of MZ twins to DZ twins. If MZ twins are more similar on a trait than are DZ, then the trait has a genetic foundation. If MZ

behavioral genetics The study of the relationship between genetic, versus environmental, factors and personality traits.

hereditary That some trait is passed down from generation to generation via genes.

heritability The proportion of variance in a trait (phenotype) that can be attributed to genetic variation.

twins are similar to each other on a trait equally or less similar than DZ twins are to each other on a trait, then that trait is caused more by the environment. By collecting data on the life and activities of the twins, behavioral genetic studies can also shed light on what aspects of the environment the twins share (e.g., home) or that are unshared (e.g., different sports teams and practices) and whether trait variation is due to one, both, or neither of those factors.

When we talk about genetic underpinnings of traits, we're talking about findings from studies with twins, or adoptive parents and children, or families with members that vary in relatedness (e.g., your biological mother is more related to you than your biological grandmother). One limitation of this method is that conclusions should be limited to the population from which the sample was drawn because that population's range of genetic and environmental similarities and differences can affect estimates.

Allport and Cattell were among the first to suggest that inherited genetic factors shape personality and that they are as important as environmental factors. Let us now consider other researchers who have pursued this causal connection between genetic inheritance and personality and focused on trait models.

Pause for Reflection

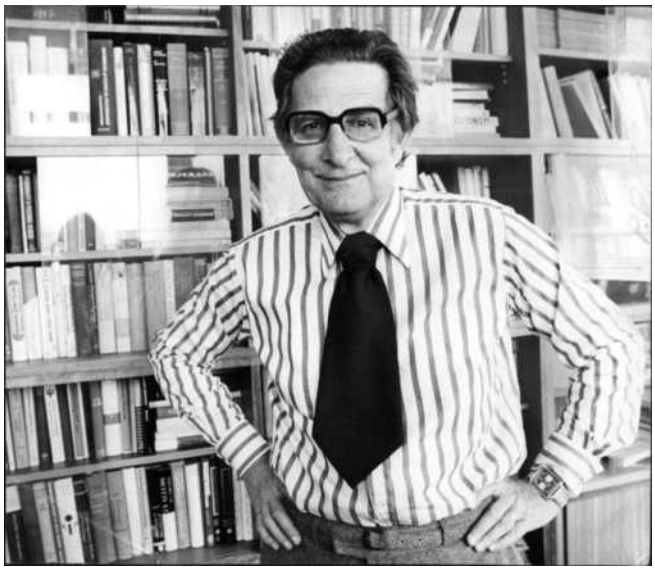
Why do you think it is important to understand whether traits result from heredity, the environment, or both?

Hans Eysenck (1916–1997)

Resigned to Psychology

Hans Eysenck was born in Berlin and immigrated to England in 1934, after Adolf Hitler came to power in Germany. Eysenck wanted to study physics at the University of London but was told that he lacked the requisite academic background. Greatly discouraged, he asked university officials if there was any other science in which he could major.

Eysenck recalled, "I was told there was always psychology. 'What on earth is that? I inquired in my ignorance. 'You'll like it,' they said. And so I enrolled in a subject whose scientific status was perhaps a little more questionable than my advisers realized" (1980, p. 156). More than 40 years later, the highly successful and productive Eysenck was asked if he had ever regretted his career choice. Often, he replied, but admitted that he was resigned to it.



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Hans Eysenck

A Prolific Record

Over the course of his career, Eysenck published an amazing 79 books, including some for the general public, and an equally amazing 1,097 journal articles. At the time of his death, he was the world's most frequently cited psychologist (Farley, 2000). Unfortunately, when he died, his wife destroyed all of his personal and professional papers (Harris, 2011).

He developed several personality measures including the Eysenck Personality Inventory, the Eysenck Personality Profiler, the Maudsley Medical Questionnaire, and the Maudsley Personality Inventory. His work has been pivotal in supporting the role of inheritance in personality and in integrating the scientific study of personality into psychology as a whole (see Corr, 2007; Revelle & Oehlberg, 2008; Rose, 2010).

The Dimensions of Personality

Eysenck spent most of his career at the University of London's Maudsley Hospital and Institute of Psychiatry, conducting research on the measurement of personality. He agreed with Cattell that personality is composed of traits, or factors, derived by the factor-analytic method. However, Eysenck was also a critic of factor analysis and of Cattell's research because of the potential subjectivity in the technique and the difficulty in replicating Cattell's findings. Although Eysenck used factor analysis to uncover personality traits, he supplemented the method with personality tests and experimental studies that considered a wide range of variables.

A Joint Effort

Eysenck and his second wife, Sybil (PhD, University of London), together developed many of the questionnaires used in their research (Furnham et al., 2010). The Eysenck Personality Inventory (Eysenck & Eysenck, 1963) required 12 years of joint research and 20 factor analyses. Hans Eysenck wrote, "Although published in our joint names, [it] is largely a monument to her skill, patience, and endurance" (1980, p. 172). Few scientists in any discipline have been so straightforward in acknowledging the research contributions of their spouses.

Three Dimensions of Personality

The result of their efforts is a personality theory based on three dimensions, defined as combinations of traits or factors. We might think of the dimensions as *superfactors* (Eysenck, 1990a, 1990b; Eysenck & Eysenck, 1985). Here begins the systematic defining and measurement of traits in a form that is among the most important in modern personality psychology. The three personality dimensions are:

E—Extraversion versus introversion
N—Neuroticism versus emotional stability
P—Psychoticism versus impulse control (or superego functioning)

Thus, this model of personality has been deemed the "PEN" model. Eysenck noted that the dimensions of extraversion and neuroticism have been recognized as basic elements of personality since the time of the ancient Greek philosophers. Eysenck (1997) also suggested that formulations of the same dimensions could be found on nearly every personality assessment device ever developed. The Eysenck Personality Inventory has since been used with great success in translated forms in nearly 40 countries, including those as diverse as Italy and Kuwait (see Abdel-Khalek, 2012; Dazzi, 2011).

Consider the list of example personality traits associated with Eysenck's three personality dimensions (refer to Table 8.4). You can tell clearly, for example, that people who score high on the traits of the E dimension would be considered relatively more extraverted, whereas people who score low would be classified as relatively more introverted. You can also tell that many of these descriptors overlap with Cattell's 16PF. Hans and Sybil Eysenck first developed the 57-yes-or-no-item Eysenck Personality Inventory (EPI) in the early 1960s to measure extraversion, neuroticism, and a response pattern named Lie, which picked up on whether participants were responding in socially desirable but dishonest ways. Psychoticism was eventually added to the measure, which has become the Eysenck Personality Questionnaire (EPQ), the modern version of which includes 90 questions.

Table 8.4 Traits of Eysenck's personality dimensions

Extraversion/ Introversion (E)	Neuroticism/ Emotional Stability (N)	Psychoticism/ Impulse Control (P)
Sociable	Anxious	Aggressive
Lively	Depressed	Cold
Active	Guilt feelings	Egocentric
Assertive	Low self-esteem	Impersonal
Sensation seeking	Tense	Impulsive
Carefree	Irrational	Antisocial
Dominant	Shy	Creative
Venturesome	Moody	Tough-minded

Stability over Time

Eysenck proposed that the PEN traits and dimensions tend to remain stable throughout the life span despite our different social and environmental experiences. Our situations may change, but our traits remain consistent. For instance, the introverted child tends to remain introverted through adolescence and into adulthood (see Ganiban et al., 2008). Other studies in the United States, England, and the Scandinavian countries confirm the stability over time of Eysenck's dimensions, particularly extraversion and neuroticism (Billstedt et al., 2014; Gale et al., 2013; Larkins & Sher, 2006). Indeed, a review of the literature suggests that neuroticism is mostly stable within people, with some smaller changes dependent on experiences and situations (Ormel et al., 2012). However, there may be cohort differences, with more recent generations scoring higher in neuroticism (Twenge, 2000).

Extraversion

Based on your own experience, you can probably describe most extraverts and introverts pretty accurately. Extraverts are oriented toward the outside world, prefer the company of other people, and tend to be sociable, adventurous, assertive, and dominant,

whereas introverts tend to prefer time alone, be more unassertive, and less risk-taking. Of course, most people probably feel that they are a mix of extraverted and introverted, which makes perfect sense because most people score closer to the middle of the scale and display a mix of behaviors and preferences. Still, knowing where on that scale we land helps predict that mix of behaviors across time and situations. Thus, when we say "extraverts" we mean people relatively higher on extraversion / lower on introversion, and when we say "introverts" we mean people relatively lower on extraversion / higher on introversion. The same goes for any other trait. There are few people at the extremes, but they exist.

Eysenck was interested in how extraverts and introverts might differ biologically and genetically. He found that extraverts tend to have a lower base level of cortical arousal than introverts do. Because the cortical arousal levels for extraverts are low, they prefer, and actively seek, excitement and stimulation. In contrast, introverts tend to shy away from excitement and stimulation because their cortical arousal levels are already high (Eysenck, 1990b). In support of this idea, more extraverted people fidgeted more in a lab study than did more introverted people, presumably to modulate their levels of arousal (Morris & Warne, 2017).

As a result, introverts tend to react more strongly than extraverts to sensory stimulation. Studies have shown that introverts exhibit greater sensitivity to low-level stimuli and have lower pain thresholds than extraverts. Music is one such stimulation. More extroverted people performed better and introverted people performed worse on comprehension and problem-solving tasks when listening to music (Mistry, 2015). Other research supports differential responses to sensory stimulation but reports less convincing evidence that such differences can be attributed to variations in cortical arousal levels (Bullock & Gilliland, 1993; Hagemann & Naumann, 2009; Stelmack, 1997). However, when it comes to positive feelings, more extroverted people may be more sensitive: When extroverts were made to feel positive affect, they evinced more activation in their right temporal lobe than more introverted people (Radsepehr et al., 2019).

Other evidence that extraversion-introversion varies with experience, versus just genetics, comes from a two-year longitudinal study with 16- to 70-year-old Americans that showed that increasing satisfaction gained from work and social relationships was associated with a higher level of extraversion (Scollon & Diener, 2006). Nevertheless, as Eysenck predicted, these differences are genetically-based, and this has been borne out in behavioral genetics research (e.g., Kandler et al., 2016).

There are patterns of thoughts, feelings, and behaviors associated with extroversion-introversion. For example, people who score high in extraversion on the Eysenck Personality Inventory have been found to experience more pleasant emotions and report being happier than those who score low in extraversion (Fisher & Francis, 2013; Holder & Klassen, 2010; Lucas & Fujita, 2000). German and Spanish adults higher in extraversion report higher engagement in one-night stands than those higher in introversion (Kaspar et al., 2016).

Neuroticism

As you can find in Table 8.4, neuroticism is characterized by anxious, depressed, tense, irrational, and moody feelings and states. Neuroticism is also associated with lower self-esteem, feelings of guilt, negative self-perceptions, intense self-expectations, and large differences between actual and ideal self-perceptions (Thomson, 2016).

Eysenck argued that in highly neurotic people, the sympathetic nervous system overreacts even to mild stressors, resulting in chronic hypersensitivity. This is the body's alarm system, which responds to stressful or dangerous events by increasing breathing rate, heart rate, blood flow to the muscles, and release of adrenaline.

This condition leads to heightened emotionality in response to almost any difficult situation. Indeed, people high in neuroticism react emotionally to events other people consider insignificant. According to Eysenck, these differences in biological reactivity underlying the neuroticism dimension are innate. People are genetically predisposed either toward neuroticism or toward emotional stability.

However, research cited previously with American adults conducted over a two-year period showed that increasing satisfaction gained from work and social relationships was associated with a lower level of neuroticism (Scollon & Diener, 2006). This hints at some effects of the environmental factor as well as of the biological factor.

Regardless of its source, neuroticism is associated with both adaptive and, more so, maladaptive outcomes. People high in neuroticism, especially women, may have an advantage when it comes to picking up on things outside of conscious perception. Specifically, research suggests that women with high neuroticism may be better at picking up on verbal stimuli that are

masked by other sounds and cannot be consciously heard (Sutil-Martín & Rienda-Gómez, 2020).

Studies in Australia found that people who scored high in neuroticism on the Eysenck Personality Inventory outperformed those who scored low when their work environment was fast-paced and stressful (Smillie et al., 2006). In other words, people high in neuroticism functioned better than people high in emotional stability in an environment that evokes the negative emotions (e.g., anxiety) that tend to drive the behavior of people high in neuroticism. However, neuroticism is a risk factor for psychopathology, such as anxiety, depression, and post-traumatic stress disorder (PTSD). For example, people who were strongly impacted by the devastating earthquake in western China (e.g., had a home damaged or destroyed, or relatives hurt or killed) and also high in neuroticism were more likely than people low in neuroticism to develop PTSD over the course of three years after the earthquake (Yin et al., 2019). A study of college students in Germany found that problematic internet use is greater among those who score high in neuroticism and are excessively focused on themselves (Montag et al., 2010).

That stress and anxiety may also come at a cost for cognitive functioning. A study in England found that people high in neuroticism tended to score lower in verbal abilities than did people low in neuroticism (Chamorro-Premuzic et al., 2006). And research on people in Sweden found that those who scored high in neuroticism in middle age were much more likely to show cognitive impairments when tested again 25 years later (Crowe et al., 2006).

Psychoticism

People who score high in psychoticism tend to be aggressive, antisocial, tough-minded, cold, and egocentric. Also, they have been found to be higher in cruelity, hostility, and insensitivity to the needs and feelings of others. This contrasts with the other end of this spectrum, impulse control. People high in psychoticism may be less able to complete cognitive tasks when their minds are busied by other tasks, such as counting backward and trying to memorize targets associated with traffic while driving, indicating a cognitive basis of lack of impulse control (Biernacki & Lekowicz, 2020). When it comes to achievement goal orientations, Iranian high school students high in psychoticism hold stronger mastery avoidance goals and weaker performance approach goals, a maladaptive combination (Asanjarani et al., 2022). Men generally tend to score higher on psychoticism than women, which led Eysenck to suggest that psychoticism may be related to male hormones. He also speculated that people who score high on all three dimensions may be apt to display criminal behavior but cited only modest empirical support for this idea (Eysenck & Gudjonsson, 1989). Indeed, high psychoticism and low impulse control has also been associated with low emotional well-being, greater problems with alcohol and drug abuse, and more violent, illegal antisocial behavior (Boduszek et al., 2013; Ciarrochi & Heaven, 2007; Sher et al., 2000). People convicted of crimes who are high in psychoticism respond more quickly to criminal violence–related versus peaceful stimuli, namely as it relates to the self, suggesting it's part of their identity to some extent (Plotka et al., 2018). Research with college students in Turkey found that those scoring high on Eysenck's trait of psychoticism relied on the internet as a substitute for face-to-face social interaction. Often their friendships were only maintained online (Tosun & Lajunen, 2010). Eysenck believed that society needs the diversity provided by people characterized by all aspects of these three personality dimensions. An ideal society affords people the opportunity to make the best use of their traits and abilities. However, some people will adapt to the social environment better than others will. He argued that if people high in psychoticism can find a productive outlet (e.g., being a coach of an aggressive sport), they may be buffered from the negative outcomes associated with psychoticism.

The Role of Intelligence

Eysenck also conducted considerable research on intelligence. Although he did not list intelligence as a personality dimension, he considered it an important influence on personality. He noted that a person with an IQ of 120, which is high, is likely to have a more complex and multidimensional personality than a person with an IQ of 80. His research also suggested that some 80 percent of our intelligence is inherited genetically, leaving only 20 percent as the product of social and environmental forces (Eysenck & Eysenck, 1985). Much work since Eysenck's has explored intelligence and its associations with personality. For example, in a study of over 800 middle school students in rural and urban China, researchers found that intelligence was related to both creative thinking and openness to experience (Shi et al., 2016). Similar results emerge in a study of over 800 adult twins in Germany, whose intelligence was related to creativity (Kandler et al., 2016). Those researchers also found that creativity and intelligence had overlapping genetic underpinnings.

Highlights

Research on Eysenck's Ideas

Research on Eysenck's three dimensions of personality shows that:

1. Extraversion (vs. introversion) is associated with . . .
   - Preferring or performing better with higher levels of stimulation
   - Positive feelings
   - Short-term sexual strategies
2. Neuroticism (vs. emotional stability) is associated with . . .
   - Perceiving stimuli outside of conscious awareness
   - Psychopathology such as anxiety, depression, and post-traumatic stress disorder
   - Deficits in some cognitive functioning
3. Psychoticism (vs. impulse control) is associated with . . .
   - Less well-being
   - More antisocial behavior
   - Deficits in some cognitive functioning

Pause for Reflection

Do you think that Eysenck's trait model is missing any key traits? Why would it be important to include other traits?

The Primary Role of Heredity

To Eysenck, traits and dimensions are determined primarily by heredity, although the research evidence shows a stronger genetic component for extraversion and neuroticism than for psychoticism. Eysenck did not rule out environmental and situational influences on personality, such as family interactions in childhood, but he believed their effects on personality were limited (Eysenck, 1990a).

His research design involved comparisons of identical (monozygotic) and fraternal (dizygotic) twins. The studies showed that identical twins are more alike in their personalities than are fraternal twins, even when the identical twins were reared by different parents in different environments during childhood. Studies of adopted children demonstrate that their personalities bear a greater similarity to the personalities of their biological parents than of their adoptive parents, even when the children had no contact with their biological parents. Recent studies also find that all three PEN traits are heritable (e.g., Loehlin & Martin, 2001; for meta-analysis, see Vukasović & Bratko, 2015). This is additional support for Eysenck's idea that personality owes more to our genetic inheritance than to our environment.

There is also research suggesting that specific genes underlie these personality traits. For example, some versions of the dopamine 4 receptor gene (DRD4) are more strongly associated with neuroticism, as evidenced in a study with 2,000 Australians followed from adolescence to young adulthood (Badcock et al., 2011). Emphasizing the importance of interaction between biology and environment, though, the link between the risky gene and neuroticism is strongest for people who experienced low maternal care as children.

Cross-cultural research demonstrates that Eysenck's three personality dimensions have been found consistently in more than 35 nations, including the United States, England, Australia, Japan, China, Nigeria, and Sweden (see, for example, Bouchard, 1985; Eaves et al., 1989; Floderus-Myrhed et al., 1980; Hur, 2009; Martin & Jardine, 1986; Tellegen et al., 1988). The confirmation of the same three personality dimensions in diverse cultures is further evidence for the primacy of inherited factors in the shaping of personality.

Robert McCrae and Paul Costa / Lewis Goldberg: The Five-Factor Model / The Big Five

Building off of both the factor-analytic (like Cattell and Eysenck) and lexical methods (like Allport), McCrae and Costa developed the most popular model and measures of personality in modern personality research. The personality traits Cattell and Eysenck derived varied in number. This does not indicate an inherent weakness in the method but instead reflects the way each theorist chose to measure personality. Some more recent personality researchers have expressed dissatisfaction with both theories, suggesting that Eysenck had too few dimensions (three) and Cattell had too many factors (sixteen).

Working at the Gerontology Research Center of the National Institutes of Health in Baltimore, Maryland, Robert McCrae and Paul Costa embarked on an extensive research program starting in the 1980s that identified five factors of personality, introducing the Five-Factor Model (McCrae & Costa, 1985b, 1987). These factors

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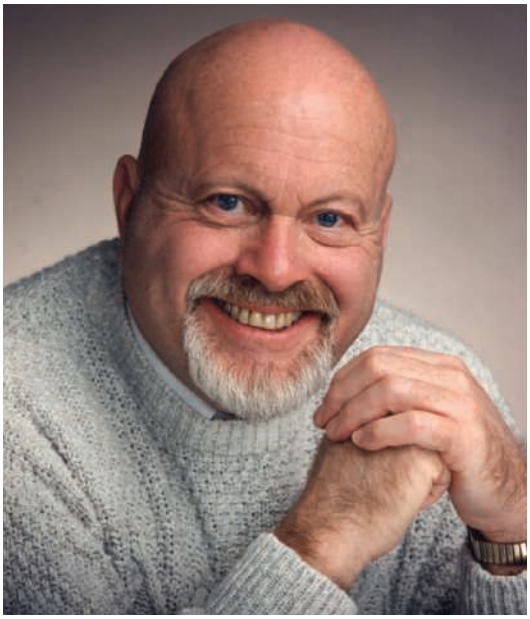
Lewis R. Goldberg

Robert McCrae and Lewis Goldberg

are neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. McCrae and Costa developed measures with full-sentence items that people could rate for how much each reflects how they are. Notably, Lewis Goldberg developed a similar five-factor model and measured these traits using single-word adjective markers of the traits (i.e., "adjective checklists") and named them the "Big Five." Over time, these models and theories have largely been conflated. McCrae and Costa view traits as being internal attributes of individuals that *drive or cause* the way they feel, think, and behave, whereas Goldberg views the traits more as *descriptions* of the way people feel, think, and behave. (For more on these differences between the McCrae-Costa and Goldberg approaches, see Kutta et al., 2020).

neuroticism One of the five main personality traits, characterized by chronic emotional instability and tendency to experience psychological distress, and is opposite emotional stability.

extraversion One of the five main personality traits, characterized by a focus of feelings, thoughts, and energy to outside of the self, especially to other people, and is opposite introversion.

openness to experience One of the five main personality traits, characterized by a desire and tendency to experience novel stimuli, including cultural, intellectual, and aesthetic. The opposite is low in openness.

agreeableness One of the five main personality traits, characterized by niceness and cooperation, and is opposite disagreeableness.

Decades and hundreds of studies later, one of the originators of the five-factor model accurately described it as marking "a turning point in the history of personality psychology" (McCrae, 2011, p. 210). Refer to Table 8.5 for the traits and some of their descriptors.

Neuroticism is characterized by chronic emotional instability and tendency to experience psychological distress. Some descriptors of neuroticism include moody, anxious, and insecure (Goldberg, 1990). The high end of the spectrum is neuroticism, and the low end of the spectrum is emotional stability. Emotional stability includes being calm, relaxed, and stable (Goldberg, 1990).

Extraversion is characterized by a focus of feelings, thoughts, and energy outside of the self, especially to other people. Extraversion is captured in how talkative, assertive, and outspoken people are (Goldberg, 1990). At the other end of the spectrum is introversion, which is characterized by a focus on inner experiences. Introversion is captured by words like shy, quiet, bashful, and inhibited (Goldberg, 1990).

Openness to experience (or just openness for short) is characterized by a seeking out and receptivity to new experiences, whether cultural, intellectual, or aesthetic. Goldberg thought about this factor as something akin to intellect or imagination, with descriptors such as creative (vs. uncreative), imaginative (vs. unimaginative), and intellectual (vs. unintellectual).

Agreeableness is characterized by a tendency to behave in nice, cooperative, and unselfish ways, with the opposite end being disagreeableness. Some defining adjectives include sympathetic, kind, warm, understanding, and sincere, in contrast with terms like

Table 8.5 McCrae and Costa's Big Five personality factors

Factor	Description
Neuroticism	Worried, insecure, nervous, highly strung
Extraversion	Sociable, talkative, fun-loving, affectionate
Openness	Original, independent, creative, daring
Agreeableness	Good-natured, softhearted, trusting, courteous
Conscientiousness	Careful, reliable, hardworking, organized

unsympathetic, unkind, harsh, and cruel that capture disagreeableness (Goldberg, 1990).

Conscientiousness is characterized by the tendency to be responsible, organized, and hardworking, with other descriptors such as neat, orderly, practical, prompt, and meticulous (Goldberg, 1990). The other end of the spectrum, low conscientiousness, can be described with disorganized, disorderly, impractical, careless, and sloppy.

Behavioral genetic studies have found that the five factors show a strong hereditary component, with a heritability estimate around .5 (Bergeman et al., 1993; Bouchard, 2004; Pedersen et al., 1988). Specifically, genetic variance accounts for about 57 percent of variance in the adult population's openness, 54 percent of extraversion, 49 percent of conscientiousness, 48 percent of neuroticism, and 42 percent of agreeableness (Bouchard, 2004).

How do these traits compare to others we have discussed? There is a similarity between the extraversion and neuroticism factors of McCrae and Costa and the extraversion and neuroticism dimensions proposed by Eysenck. Further, agreeableness and conscientiousness in the McCrae–Costa model may represent the low end of Eysenck's psychoticism dimension (impulse control). Openness shows a high positive correlation with intelligence. Similarly, agreeableness correlates with Adler's concept of social interest, which we discussed in Chapter 4.

Pause for Reflection

How high or low do you think you are in each of the Big Five personality traits?

Measuring the Five Factors

The factors were confirmed through a variety of assessment techniques, including self-ratings, objective tests, and observers' reports. McCrae and Costa then developed a personality test, the NEO Personality Inventory (NEO-PI), using an acronym derived from the initials of the first three factors. The test is available in a number of revised forms. These usually include items that capture an important facet of one personality trait and then individuals rate the extent to which the item describes them. The participants can use a response scale, for example, from 1 meaning "strongly disagree" to 7 meaning "strongly agree." Then, the scores for each trait are added up or averaged. Some items might capture the high end of the trait or the low end, so researchers must also "reverse score" some items. To what extent do you agree with the following statements from the NEO PI Revised version 3 (NEO-PI-3) using the 1 to 7 scale? And which items do you think capture facets of which traits?

1. I have frequent mood swings.
2. I don't find it easy to take charge of a situation.
3. I enjoy trying new and foreign foods.
4. I keep my belongings neat and clean.
5. Most people I know like me.

As you may have guessed, the first captures neuroticism (N), second introversion (so reverse coded extraversion, E), the third openness (O), the fourth conscientiousness (C), and the fifth agreeableness (A).

Following Goldberg, many researchers use lists of adjectives that capture facets of these traits. Participants typically respond to the lists by selecting the words that best describe themselves, marking them yes or no, or providing a rating for how much they reflect one's personality. The adjective lists can be as short as 10 items or as expansive as 100 items. For example, Goldberg's (1993) Big Five Inventory has 44 items, and people rate the extent to which they "see myself as someone who . . . ," for example, is "a reliable worker" (C), "tense" (N), "outgoing, sociable" (E), "forgiving" (A), and valuing of "artistic, aesthetic experiences" (O). One of the shortest valid and reliable measures is the Ten-Item Personality Inventory (TIPI; Gosling et al., 2004), provided in Figure 8.1. Short measures are helpful for gathering data without using too much of participants' time or researchers' resources. But they gather less depth of information.

conscientiousness One of the five main personality traits, characterized by the tendency to be responsible, organized, and hardworking, and is opposite low conscientiousness.

Figure 8.1

Ten-Item Personality Inventory (TIPI)

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
1	2	3	4	5	6	7

I see myself as:

1. _____ Extraverted, enthusiastic.
2. _____ Critical, quarrelsome.
3. _____ Dependable, self-disciplined.
4. _____ Anxious, easily upset.
5. _____ Open to new experiences, complex.
6. _____ Reserved, quiet.
7. _____ Sympathetic, warm.
8. _____ Disorganized, careless.
9. _____ Calm, emotionally stable.
10. _____ Conventional, uncreative.

TIPI scale scoring ("R" denotes reverse-scored items):

Extraversion: 1, 6R; Agreeableness: 2R, 7; Conscientiousness; 3, 8R; Emotional Stability: 4R, 9;

Openness to Experiences: 5, 10R.

Measures of the Big Five traits have been translated into or created in many languages around the world. For example, both the Brazilian Reduced Scale of Big Five Personality Factors (ER5FP), with 20 items, and the Reduced Inventory of Big Five Personality Factors (IGFP-5R), with 32 items, have been shown to be valid measures (Laros et al., 2018). Likewise, the Dutch language version of the Big Five Inventory has been validated using data from 7,533 people in Belgium (namely, Flanders; Lovik et al., 2017).

Research comparing the predictive value of the five factors and of their lower level traits found that higher level factors and lower level traits have high predictive validities, but that validities of the traits

were higher than those of the factors (Paunonen, 1998; Paunonen & Ashton, 2001). Note that research has shown that the results of observer and self-report five factor or Big Five measures, like all self-report inventories, can be distorted by people's responding in socially desirable but dishonest ways.

Pause for Reflection

How do these five traits compare with those proposed by other researchers we have covered so far? Do you think that the five factors cover all basic traits? Are others missing?

Cross-Cultural Similarities and Differences

The five factors have been consistently observed in Eastern as well as Western cultures, a finding that also supports a genetic component. McCrae and Costa noted that the five factors and their traits appear to represent a "common human structure of personality" that transcends cultural differences (1997, p. 515).

These five factors and their traits have been found in more than 50 diverse nations, including Britain, Germany, Portugal, the Czech Republic, Turkey, Israel, China, Korea, Japan, France, the Philippines, Russia, India, Denmark, Italy, Lebanon, Canada, and Romania, and the United States (see Allik et al., 2009; Heine & Buchtel, 2009; Ispas et al., 2014). For example, a large study with nearly 6,000 adolescents in China, Czech Republic, Slovenia, Spain, Taiwan, and Turkey found that personality was captured very well by the Big Five (Vazsonyi et al., 2015).

In summary, variation in the Big Five can explain variation in personality across different cultures. Put another way, people across cultures tend to differ from each other within that culture on conscientiousness, extraversion, neuroticism/emotional stability, agreeableness, and openness to experience, and these traits correspond to people's thoughts, feelings, and behavior. But that doesn't mean that the average personality profile of people across cultures is similar. Evidence for this comes from a large study across 13 countries; researchers examined the correlations between average personality profiles of different countries (Gardiner et al., 2019). They found that people's personalities were most similar between the United States and Canada. The most dissimilar average personality profiles were among South Korea, Russia, and Poland. Personalities in China and Russia also differed greatly. The researchers also examined what cultures had people the most and the least different from each other. People in the Czech Republic were more similar to each other, whereas people in South Korea were the most different from each other in terms of personality.

However, what might also differ across cultures is how the different facets (i.e., the more specific descriptors that make up the trait) of the personality traits relate to one another and to the broader trait. In a study of over 10,500 people from Australia, Brazil, Canada, Chile, China, Finland, Germany, Italy, India, Indonesia, Iran, Japan, Malaysia, the Netherlands, Nigeria, Norway, Pakistan, the Philippines, Portugal, Romania, Russia, Slovakia, Spain, Tanzania, Uganda, the United Arab Emirates, and the United Kingdom, researchers found that correlations among the lower level descriptors for conscientiousness, extraversion, and neuroticism/emotional stability were lower for people from non-Western countries compared to Western countries (Park et al., 2022).

It is important to note that the societies in which the five factors have been measured tend to be industrialized, literate, and well-educated on average. Thus, this structure of personality may not extend to societies that are very different on those dimensions. Indeed, an extensive study of a small, isolated, largely illiterate tribal group residing in a remote area of Bolivia demonstrated that the five-factor pattern of personality does not emerge in this context (Gurven et al., 2013).

The Relative Value of the Factors in Different Cultures

Although the same factors are common to virtually all industrialized cultures, major differences have been recognized in their relative importance and social desirability from one culture to another (Allik & McCrae, 2004; McCrae & Terracciano, 2005). For example, Australians consider extraversion and agreeableness to be more desirable to have than the other three factors. By contrast, Japanese people consider conscientiousness to be more important than all other factors. In other words, in Japanese society, it is more important for a person to be conscientious than to be extraverted, agreeable, open, or emotionally stable.

In China (Hong Kong) and in India, agreeableness was found to be the most important factor. In Singapore, emotional stability was more important, whereas in Venezuela, extraversion is highly praised. No single factor was found to be more significant than others in Chile, Finland, Germany, the Netherlands, Norway, Turkey, and the United States. Overall,

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Whether others are good at judging what personality traits we have will depend on how well they know us and whether they're judging from our behavior or social media.

Europeans and Americans tended to score higher in extraversion and openness to experience and lower in agreeableness than did Asians and Africans (Allik & McCrae, 2004; McCrae & Terracciano, 2005).

Gender Differences

There seem to be consistent gender differences in the five factors. Research carried out in 55 countries, both Eastern and Western, found that women reported higher levels of neuroticism, extraversion, agreeableness, and conscientiousness than men. These differences were most pronounced in prosperous and egalitarian nations where women had greater opportunity for education and employment (Schmitt et al., 2008). For example, in a study over nearly 1,400 Italian adults, women scored higher than men in neuroticism, extraversion, agreeableness, and conscientiousness (Chiorri et al., 2015). Thus, there does not seem to be a gender difference in openness overall. What about the related trait of creativity? Although men may be higher on the sort of creativity employed in a verbal divergent thinking task than women, there are no gender differences in other measures of creativity (e.g., creative drawing tasks; Taylor & Barbot, 2021).

Pause for Reflection

Are there pressures that men and women have experienced differently over time or in modern times that might push and pull on personality traits in different ways?

How People View Themselves and Others

There appears to be a consistency across cultures in how people view their own personalities and those of others. People tend to consider themselves as being more neurotic and open to experience than others see them. They also tend to see others as higher in conscientiousness than they believe themselves to be (Allik et al., 2010). Social media displays of personality complicate this further, with people manipulating their self-presentation online (e.g., Maranges et al., 2023), such that people might overperceive socially desirable traits from the targets' profiles that don't match those targets' actual self-reported personalities (e.g., Harris & Bardey, 2019). However, when it comes to observing and thinking about personality as manifest in specific behaviors, people are better judges. In a study of American young adults (college students), participants (targets) displayed behavior across 22 activities in 20 one-hour sessions, reported their behavior, and had their behavior evaluated by one to three other people (observers). Across all sorts of activities, observers agreed with the targets about the traits they displayed as well as with other observers' evaluations (Jayawickreme et al., 2023). Perhaps because they observe more specific behaviors, close friends are quite accurate at perceiving each other's personality traits, even beyond the tendency to see one's friends as socially desirable (Huelsnitz et al., 2020). Thus, social media obscures, but closeness and exposure to specific behaviors clarify accurate personality perception.

Stability of the Factors over Time

There are a large number of studies dealing with the stability of the five factors over time. The primary finding is that most of the traits (neuroticism, extraversion, agreeableness, and conscientiousness) are relatively stable over time. That is, most people's individual personality profiles will be similar across their different ages, with the exception of openness to experience, which may vary a lot within a person over time. Although individuals' personalities are pretty stable over time there is also the "maturity principle" of personality. Most people mature in similar ways, with personality similarly shifting during certain stages of their lives. For example, older adults tend to be more conscientious and agreeable and less extraverted and neurotic than younger people.

Pause for Reflection

How do you think personality changes over time for people in general? Why are some traits more adaptive at certain life stages than others?

The five factors have been found in children as well as adults. Preschool teachers were asked to predict what their 3- to 6-year-old students would be like in 20 years. Their expectations, based on observations of the children's behavior, corresponded with the students' scores on the Big Five personality factors years later (Graziano et al., 1998). Longitudinal research studying the same people over a 6-year period demonstrated a high level of stability for all five traits (Costa & McCrae, 1988). A study in Finland of about 15,000 twins ages 18 to 59 found a high degree of stability for both men and women on extraversion and neuroticism across a 6 year period (Viken et al., 1994).

A study of American men and women from late adolescence into adulthood found modest but statistically significant stability for the extraversion and neuroticism factors (Carmichael & McGue, 1994). Men and women college graduates reported extraversion when they were students and again 20 years later. The researchers found a significant positive correlation between the test scores at the two ages, suggesting that those who were extraverted in college remained so at midlife (Von Dras & Siegler, 1997). Another large-scale study comparing measures taken 40 years apart from adults in the United States found that the factors of extraversion and conscientiousness remained the most stable over the duration of the research period (Hampson & Goldberg, 2006). In a study of over 1,100 Mexican Americans across 12 years, researchers observed stability of personality as measured with the Big Five Inventory (Atherton et al., 2022).

What about changes over time based on stage of life? A comparison of American and Belgian adolescents over a four-year period showed that the factors of extraversion, agreeableness, and conscientiousness remained stable, whereas openness to experience increased for both men and women during those four years (McCrae et al., 2002). Changes in personality from adolescence to adulthood, as studied in the Czech Republic and in Russia, occur in that neuroticism, extraversion, and openness to experience declined during those years, whereas agreeableness and conscientiousness rose (McCrae et al., 2004a, 2004b). Research with adults in Germany in their 40s and then again in their 60s showed that neuroticism declined from the earlier decade to the later one (Allemand et al., 2007). In a longitudinal study of life transitions with 951 Dutch adolescents, researchers found that personality matures over the course of adolescence and young adulthood, but that personality may also prompt life changes (e.g., leaving the parental home, starting important romantic relationships; Van Dijk et al., 2020).

A large-scale research review showed that neuroticism, extraversion, and openness appeared to decrease as people reached their 60s, whereas agreeableness and conscientiousness seem to increase with age (Debast et al.,

Highlights

Research on the five factors / Big Five

Research on the five factors of personality shows that:

- The five factors have strong genetic underpinnings—they are hereditary and heritable.
- All five factors have been found in diverse, industrialized cultures.
- Most of the factors remain stable to some degree over the life span, but we also observe a "maturity principle."
- Women report higher levels of neuroticism, extraversion, agreeableness, and conscientiousness than men.
- We tend to see others as being more conscientious and less neurotic than ourselves.
- But we also know our friends' personalities well.

2014). In a study of nearly 2,000 Americans from adolescence to 50 years later, researchers found some stability in personality traits but also a "maturity principle" that describes how most people's personalities changed over the course of adulthood to be more adaptive—specifically higher agreeableness, conscientiousness, and emotional stability (Damian et al., 2019).

Correlates of the Big Five

Personality is associated with outcomes in every domain of life, as far-reaching as emotional functioning, mental health, physical health, popularity, relationships, family, academics, and occupations. For example, a study in Sweden of identical and fraternal twins reared together and apart confirmed that for women, desirable life events were predicted by personality, which was highly heritable (Saudino et al., 1997). Women who scored high in extraversion and openness to experience were significantly more likely to experience positive life events. Women who scored high in neuroticism were significantly more likely to experience negative life events. Other research with college students found that over a four-year period, extraverts were likely to experience a greater number of positive events, such as good grades, a pay raise, or marriage. Students scoring high in neuroticism were more likely to experience negative events such as illness, weight gain, traffic tickets, or rejection by graduate schools (Magnus et al., 1993).

Pause for Reflection

How exactly do you think that personality traits are related to events in people's lives?

Mental Health, Emotional Well-Being, and Happiness A metasynthesis of 150 meta-analytic effects from 500,000 participants found that personality predicts mental health (Strickhouser et al., 2017). Personality has also been tied to happiness, especially perceptions that one will have personal happiness in the future, which was positively associated with extraversion, agreeableness, conscientiousness, and openness, and negatively associated with neuroticism (Kajonius, 2021). In a number of studies, extraversion was positively related to emotional well-being (e.g., Heller et al., 2004; Lischetzke & Eid, 2006). Neuroticism has been negatively related to emotional well-being. Researchers have concluded that people high in extraversion and low in neuroticism may be genetically predisposed to positive emotionality (Costa & McCrae, 1984; Watson & Clark, 1992).

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People higher in extraversion and lower in neuroticism experience more positive feelings and happiness.

A study of men and women college students found that those scoring high in extraversion were able to cope with everyday life stress better than those scoring low in extraversion, perhaps largely because they were also more likely to seek social support to help them deal with stress (Amirkhan et al., 1995). It has also been found that the depression facet of neuroticism and the positive emotions/cheerfulness facet of extraversion are the most consistent predictors of general life satisfaction and emotional well-being (Schimmack et al., 2004).

Other studies of teenagers conducted in the United States, Brazil, and Italy confirmed that extraversion was related to happiness, optimism, and life satisfaction. Openness to new experiences, conscientiousness, and low scores on neuroticism were also predictive of having positive feelings (Bassi et al., 2014; Suldo et al., 2014; Zanon et al., 2014).

In another study, persons high in agreeableness and conscientiousness showed greater emotional well-being than persons low in these traits (McCrae & Costa, 1991). This has been replicated more recently with college students (e.g., Fino & Sun, 2022). Conscientious people may be more likely to engage in healthy behaviors that require planning and effort. Agreeable people may derive emotional support from their friends, whom they have prioritized through being cooperative, helpful, altruistic, honest, and selfless (Digman, 1990; John, 1990). A study of workers in China found that the factors of extraversion, conscientiousness, and low neuroticism were related to subjective well-being (Zhai et al., 2013).

Psychological distress has been associated with high scores on the neuroticism factor (De Raad, 2000; Larsen & Kasimatis, 1991; Ormel & Wohlfarth, 1991).

People high in neuroticism have been found to be prone to depression, anxiety, substance abuse, and self-blame (Jorm, 1987; Kotov et al., 2010; Parkes, 1986). Research with adults in the United States, ages 25 to 74, found that everyday stressors had significantly higher negative emotional effects for the people who scored high in neuroticism (Mroczek & Almeida, 2004).

In a study of over 1,700 students in the often-stressful fields of veterinary medicine, medicine, pharmacy, dentistry, and law, high neuroticism and low conscientious were associated with poorer mental health (i.e., lower mental well-being, higher psychological distress, depression, and suicidal ideation) (Lewis & Cardwell, 2020). A large-scale study in Germany found that those who scored high on neuroticism and openness had a greater risk for suicide. Those with the lowest risk were high in extraversion and conscientiousness (Bluml et al., 2013). In contrast, openness can have positive effects on mental well-being when directed into creative self-efficacy (Fino & Sun, 2022).

A study of over three million (3,137,694) people analyzed five-factor personality data to understand whether certain combinations of traits were more adaptive than other combinations and how those personality profiles predicted mindsets that tend to predict good mental health—life satisfaction, job self-efficacy, and passion toward work, as well as favorable value systems (Fisher & Robie, 2019). The most adaptive profiles—high on openness, conscientiousness, extraversion, agreeableness, and emotional stability (i.e., low on neuroticism)—were associated with social network size, satisfaction with life, job self-efficacy, harmonious passion toward work, and the values of achievement, benevolence, and self-direction.

Physical Health Research indicates that high scorers in conscientiousness are likely to be healthier and live longer (Friedman & Martin, 2011). High conscientiousness was associated with a lower risk of death from both stroke and coronary heart disease (Jokela et al., 2014; Lee et al., 2014). This likely has a lot to do with people high in conscientiousness planning and doing the hard work of health behaviors, including eating healthfully, exercising, and avoiding unhealthy behaviors. Indeed, a 14-year longitudinal study of nearly 1,200 individuals in the United States (specifically, Hawaiians) found that teacher ratings of conscientiousness in elementary school related to health behaviors and health over time (Hampson et al., 2016). A study of adult smokers showed that those who were more conscientious were less likely to smoke at home than those who were less conscientious. This suggests that conscientious smokers were more aware of the health risks of smoking indoors (both to themselves and to others living with them) and acted to reduce those risks (Hampson et al., 2000).

American college students high in conscientiousness are more likely to wear seat belts, exercise, get sufficient sleep, and eat more fruits and vegetables than those low in conscientiousness (Raynor & Levine, 2009). Research on adolescents and young adults who had been diagnosed with diabetes showed that those who scored higher in conscientiousness sought more information about managing their condition and were more diligent about self-care than those who scored lower in conscientiousness (Skinner et al., 2002).

British university students who were more conscientious were far less likely to display hypochondriacal complaints (that is, to believe they were sick when they likely weren't) than those who were less conscientious (Ferguson, 2000). And a telephone survey of American adults showed that those who scored higher in conscientiousness took greater responsibility for engaging in healthy behaviors than did those who scored lower in conscientiousness (Tucker et al., 2006).

Clearly, high conscientiousness has positive implications for health. What about the other Big Five traits? Agreeableness may have protective effects, whereas neuroticism may be a risk factor. Findings are mixed when it comes to extraversion. Openness does not seem to be strongly linked to health. Those scoring high in neuroticism were found to be more likely to have heart disease (Jokela et al., 2014; Lee et al., 2014). A study of patients with chronic renal insufficiency (a kidney disorder), conducted over a four-year period, found that those who scored higher in neuroticism on the NEO had a mortality rate 37.5 percent higher than those who scored lower in neuroticism (Christensen et al., 2002). High neuroticism predicted reduced physical health and subjective well-being in old age, but ironically, it was also associated with greater longevity. This suggests that people high, versus low, in neuroticism may live longer but are not happy about it and have more health problems (Eysenck, 2009; Friedman et al., 2010).

Two large-scale studies of Americans found that higher extraversion was linked to an increased risk for stroke (cerebrovascular accidents; Jokela et al., 2014; Lee et al., 2014).

Two characteristics related to health—weight and sleep—may also be affected by personality type. Research in Australia and in Finland showed that those who scored high in extraversion, agreeableness, and conscientiousness got more and better-quality sleep, whereas those high in neuroticism reported worse sleep (Hintsanen et al., 2014).

That same metasynthesis of over 150 meta-analytic effects from over 500,000 participants found that personality is indeed an important predictor of health, and that effects were stronger for conscientiousness, agreeableness, and neuroticism than for extraversion and openness to experience (Strickhouser et al., 2017).

Pause for Reflection

What is it about personality, especially conscientiousness, that might lead to better or worse health?

Online Behavior Whether using social media, online shopping, or playing games, the online world is another context in which different personalities will drive different behaviors. And these behaviors can be better or worse for mental health.

American adults high in extraversion were more likely to use social media than those low in extraversion (Mark & Ganzach, 2014). American men high in emotional instability were even more likely to use these sites (Correa et al., 2010). In Australia, adults who scored high in extraversion, low in conscientiousness, and reported being socially lonely were more likely to use Facebook (Ryan & Xenos, 2011). In Israel, people who scored high in conscientiousness had more Facebook friends than those who scored low. People high in neuroticism posted more of their photos on Facebook than those who scored low in neuroticism (Amichai-Hamburger & Vinitzky, 2010). In Finland, those who scored high in extraversion had more Facebook friends than those who scored low (Lonnqvist et al., 2014). In the United States and in Germany, college students high in conscientiousness, agreeableness, and emotional stability were far less likely to post on Facebook about personal matters such as substance abuse or sexual behavior. Overall, however, more American students were inclined to post such content than German students, independent of personality traits (Karl et al., 2010).

In the Netherlands, high internet use bordering on the compulsive and addictive was greatest among introverted, disagreeable, and emotionally less stable and lonely adolescents (Van der Aa et al., 2009). In Germany, addiction to video gaming was highest among those high in neuroticism and low in conscientiousness and extraversion (Muller et al., 2014).

In Taiwan, research on college students showed that those high in conscientiousness shopped online for convenience; those high in openness shopped online to have a new adventure; those high in neuroticism shopped online in order to avoid other people (Huang & Yang, 2010). A study of 11- to 16-year-old Americans who scored high in openness to new experiences spent more time using computers and playing video games than those who scored low in openness to experience (Witt et al., 2011).

Among American college students, those more likely to engage in sexting (i.e., sending suggestive and sexualized photos) were found to be high in neuroticism and low in agreeableness (Delevi & Weisskirch, 2013).

Addictive and Antisocial Behavior Among college students in Norway, it was found that neuroticism was linked to internet addiction, exercise addiction, compulsive buying, and study addiction. Extraversion was linked to being addicted to Facebook and smartphone usage as well as exercise addiction and compulsive buying (Andreassen et al., 2013). Similarly, in a study of nearly 500 Chinese university students, those high in neuroticism were higher in internet addiction (Tian et al., 2021). Further, low conscientiousness, extraversion, agreeableness, and openness were also associated with more internet addiction, and these effects were mediated by maladaptive thinking patterns.

A study of adults showed that those who scored low in conscientiousness and agreeableness were far more likely to be heavy users of alcohol or illegal drugs than were those who scored high in these factors (Walton & Roberts, 2004). That conscientiousness finding plus one linking high extraversion to more drug and alcohol use has been replicated in a more diverse sample (Livingston et al., 2014).

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Personality predicts health. People high in conscientiousness may have better health outcomes because they engage in more healthy behaviors.

A study of young adults found that those who scored high in neuroticism and openness to new experiences were more likely to use prescription drugs that had not been prescribed for them (Benotsch et al., 2013). A large study in Australia with about 3,200 adults found that a combination of high neuroticism, low agreeableness, and low conscientiousness was associated with alcohol, nicotine, cannabis, and gambling addiction disorders (Dash et al., 2019).

A 25-year study of residents of Finland found that those high in agreeableness reported less alcoholism and lower levels of depression, had lower arrest records, and showed greater career stability than those low in agreeableness (Laursen et al., 2002). German adults who committed a violent offense and had substance abuse issues were particularly high in impulsive antisociality, which was predicted by high neuroticism, low agreeableness, and low conscientiousness (Nigel et al., 2018). Examining antisocial behavior in younger people, a study of adolescents in Ireland found that the factors of (low) agreeableness, (low) conscientiousness, (high) neuroticism, and (high) extraversion were linked to engaging in criminal behavior (O'Riordan & O'Connell, 2014).

Work and School Not surprisingly, people high in conscientiousness tend to be reliable, responsible, punctual, efficient, and dependable, and usually earn better grades in school than people low in conscientiousness (Back et al., 2006; Chowdhury & Amin, 2006; Wagerman & Funder, 2007). A study of British university students found that those high in conscientiousness were more organized, self-disciplined, and achievement oriented in terms of planning for future goals (Conner & Abraham, 2001). In other research, the factors of agreeableness, conscientiousness, and openness correlated positively with academic performance in college. Those high in all three got better grades (Poropat, 2009). People high in neuroticism report getting fewer good grades and not being accepted into graduate school compared to people low in neuroticism on average (Magnus et al., 1993). People high in openness tend to have a wide range of intellectual interests and to seek challenges. They are more likely to change jobs, try different careers, and expect more varied life experiences than people scoring low in openness (McCrae & Costa, 1985a, 1985b). Those high in both openness and extraversion are more likely to be self-employed. Extraverts are also likely to be more active during their retirement years and more satisfied with retirement (Lockenhoff et al., 2009; Robinson et al., 2010; Shane et al., 2010).

In research conducted in the workplace, it was found that people who scored high in conscientiousness were more likely than low scorers to set high goals for themselves and strive to achieve them, to initiate desirable work behaviors, and to receive high performance ratings. The conscientiousness factor was also shown to be a strong predictor of job performance for professional, police, managerial, sales, and skilled labor jobs (Barrick & Mount, 1996; Barrick et al, 1993; Stewart et al., 1996).

Research has also found that personalities drive decisions of what to study in school and what occupation to pursue. For example, in a study of professional-degree-seeking students in the United Kingdom, more agreeable people pursued degrees in veterinary, medical, and dentistry schools, whereas less agreeable people pursued degrees in law (Lewis & Cardwell, 2020).

Pause for Reflection

What is it about personality that might lead to better or worse school and work outcomes?

Social Relationships Our personalities manifest in the way we feel, think, and behave, including in relation to other people. It's not surprising, then, that personality can predict a vast array of relationship outcomes. Of course, the structure of our lives as it relates to relationships can also shape our personalities in turn.

Teenagers in the Netherlands who scored high in extraversion, emotional stability, and agreeableness were judged by their classmates to be more popular and likable (Van der Linden et al., 2010). Research in the United States found that people high in extraversion and agreeableness were rated by others as physically more attractive than those low in extraversion and agreeableness (Meier et al., 2010).

Studies of college students in the United States found that individuals high in extraversion enjoyed higher status and prominence among their peers than those who scored low in extraversion (Anderson et al., 2001). People high in extraversion rated social situations as positive only if the situation was pleasant, indicating the importance of positive emotions in the factor of extraversion (Lucas & Diener, 2001).

A study of fifth- to eighth-grade students showed that those high in conscientiousness were more likely to be accepted by their peers, to have more and better-quality friendships, and to be less likely to be the target of aggression than those low in conscientiousness (Jensen-Campbell & Malcolm, 2007).

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Personality shapes how we think, feel, and behave in social relationships, and therefore the sort of friend, partner, and family member we each make.

An 18-month study of university students in Germany from the beginning of their first year of college found significant effects of three of the Big Five personality factors on the students' social relationships. Students scoring high in extraversion made more friends during the 18-month period and were more likely to fall in love than students scoring low in extraversion. Those high in agreeableness experienced less conflict with acquaintances of the opposite gender, and those high in conscientiousness were more likely to maintain contact with their parents (Asendorpf & Wilpers, 1998).

A review of the scientific literature on personality and relationships found that agreeableness has the most positive effect and neuroticism has the most negative effect on both romantic relationships and friends (Harris & Vazire, 2016). The agreeableness finding makes sense given that people low in agreeableness may not get along with many people because they are not only less nice, but also more likely than people high in agreeableness to hold a variety of prejudicial attitudes (Crawford & Brandt, 2019). The neuroticism finding makes sense because people higher in neuroticism are less likely to engage in prosocial (for-other-people or moral) behavior, in part because they tend not to take other people's perspectives into account (e.g., Leng et al., 2020). But conscientiousness may be especially important to flexibly respond (i.e., displaying varied personality) across different social situations, like interacting with family, friends, partners, and coworkers (Nasello et al., 2023).

A study of couples in the Netherlands showed that low scores in neuroticism and high scores in extraversion for both partners was related to marital happiness (Barelds, 2005). Research with newlywed couples in the United States showed that self-ratings of agreeableness and conscientiousness increased significantly and self-ratings in neuroticism decreased significantly over the first two years of the marriage. Ratings of each person made by their spouses were different, however. Partners reported significant decreases in the other person's conscientiousness, agreeableness, extraversion, and openness over the two-year period (Watson & Humrichouse, 2006). In other words, people believed they were becoming better people during the two years they had been married, but their spouses did not agree.

When American college students were asked to rate the importance they placed on a variety of life goals—for example, marriage, fun-filled activities, and the serious pursuit of a career—it was found that those who desired higher economic, social, and political status scored high in extraversion and low in agreeableness (Roberts & Robins, 2000). Other research found that those high in agreeableness, conscientiousness, and openness were also rated as better parents (Carver & Connor-Smith, 2010; Prinzie et al., 2009). Likewise, people high in those traits plus extraversion were more likely to engage in behaviors that helped other people online, as evidenced in a study in China (Leng et al., 2020).

People with whom we often interact, for example, live with, may also shape our personality. A study of high school graduates in Germany found that those who stayed living with their parents scored low on openness to new experiences. Those who chose to live with roommates showed increases in openness, whereas those who chose to live with a romantic partner showed increases in conscientiousness (Jonkmann et al., 2013).

Personality may even shape our relationships with pets. The five-factor model pinpointed differences between so-called dog people and cat people. Those who prefer dogs score higher in extraversion, agreeableness, and conscientiousness but lower in neuroticism and openness than those who prefer cats (Gosling et al., 2010).

Pause for Reflection

What combination of traits do you want your family members to have? Your friends? Your romantic partner? Why?

Highlights

Research on the Five Factors

Mental health, emotional well-being, and happiness are associated with
- High extraversion, conscientiousness, and agreeableness
- Low neuroticism

Physical health is associated with
- High conscientiousness and agreeableness
- Low neuroticism

Online behavior is associated with
- High extraversion
- High neuroticism (risk factor)
- Low conscientiousness and agreeableness (risk factor)

Addictive and antisocial behaviors are associated with
- High extraversion and neuroticism
- Low conscientiousness and agreeableness

Work and school success are associated with
- High conscientiousness
- Some evidence for high agreeableness, openness, and extraversion
- Some evidence for low neuroticism

Quality social relationships are associated with
- High extraversion, conscientiousness, and agreeableness
- Low neuroticism

Michael Ashton and Kibeom Lee: HEXACO

The Six-Factor Model

Michael Ashton, of the Psychology Department at Brock University in St. Catherine's, Ontario, Canada, and Kibeom Lee, of the Psychology Department at the University of Calgary, Alberta, Canada, have proposed a six-factor model of personality (2007, 2009). Two of the factors—extraversion and conscientiousness—are similar to those found in the five-factor model; the other four differ in various degrees from earlier factors and are unique to this model of personality (Ashton & Lee, 2008; Shepherd & Belicki, 2008). The six factors or dimensions of the HEXACO (an acronym derived from the factors) model are Honesty/Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to experience (also listed in Table 8.6).

Assessment and Correlates of the Six Factors

The dimensions of this six-factor model can be assessed, for example, by two self-report inventories: the 100-item HEXACO Personality Inventory Revised, or the 60-item HEXACO-60. Short versions of the scales have also been developed, with the Brief HEXACO Inventory (BHI; De Vries, 2013) showing the best correspondence with the original scales (Julian et al., 2022). These have been shown to be valid and reliable measures (Ashton & Lee, 2009). The six factors have been documented in several different cultures, including Dutch, French, German, Hungarian, Italian, Korean, Polish, Greek, Croatian, Turkish, and Filipino (Ashton et al., 2006; Ashton et al., 2004; De Raad & Barelds, 2008).

Research is ongoing to determine the correlates of the six-factor model but already highlights the benefit of the additional factor honesty/humility, which has

Table 8.6 Six personality factors of the HEXACO model

Factor	Description
Honesty/humility	Sincere, honest, faithful VERSUS greedy, pretentious, hypocritical, boastful
Emotionality	Emotional, oversensitive, faithful, anxious VERSUS brave, tough, self-assured, stable
Extraversion	Outgoing, lively, sociable, cheerful VERSUS shy, passive, withdrawn, reserved
Agreeableness	Tolerant, peaceful, gentle, agreeable VERSUS quarrelsome, stubborn, and ill-tempered
Conscientiousness	Disciplined, diligent, thorough, precise VERSUS reckless, lazy, irresponsible, absent-minded
Openness to experience	Creative, innovative, unconventional VERSUS shallow, conventional, unimaginative

Source: Hexaco Personality Inventory—Revised. © 2007. Used by kind permission of Michael C. Ashton and Kibeom Lee.

been shown to account for variation in personality that the five factors miss (Ashton & Lee, 2018; Lee & Ashton, 2019; Lee et al., 2022). For example, higher honesty/humility is associated with higher forgiveness and empathy and lower psychopathy in a study of nearly 900 Spanish adults (Romero et al., 2015). Personality as measured via HEXACO is associated with happiness: Among college students in Portugal, the honesty/humility factor correlated with happiness (Oliveira, 2013a). It is also associated with job performance. A study of employed Americans found that those who scored high in honesty/humility received higher job performance ratings than those who scored low (Johnson et al., 2011). A huge study with nearly 10,300 adults across 18 countries (Belgium, Sonia, Catalonia, Chile, China, Germany, Hungary, Israel, Italy, Poland, Qatar, Senegal, Spain, Switzerland, Togo, Tunisia, and the United States) and in 13 languages found that high HEXACO extraversion, conscientiousness, and openness and low emotionality positively predict the likelihood of having a higher social position based on one's occupational prestige (García et al., 2021). This study also found a large gender difference in emotionality, with women scoring higher than men. As with some of the Big Five traits, honesty/humility predicts criminal behavior. People convicted of crimes in England and Australia scored low on honesty/humility and high on Eysenck's psychoticism dimension (Dunlop et al., 2012; Rolison et al., 2013).

Given how important trustworthiness is in our social partners, it is not surprising that when it comes to choosing a romantic partner, people are very concerned with the honesty/humility of others (Mogilski et al., 2019).

HEXACO traits have also been linked with social attitudes. For example, research in Egypt found that high scores on the honesty/humility factor correlated with stronger religious feelings (Aghababaei, 2012; Aghababaei & Arji, 2014). In a study of adults in Italy, a high score on the HEXACO factor of conscientiousness was linked to the tendency to vote for right-wing political parties, whereas people who tended to vote for left-wing political parties scored higher in honesty, agreeableness, and openness (Chirumbolo & Leone, 2010). Research with college students in New Zealand found that those low in openness to experience and emotionality scored high in right-wing authoritarianism and prejudice toward dissident groups (Sibley et al., 2010).

Pause for Reflection

Do you think that honesty/humility is different than agreeableness? Why or why not?

Delroy Paulhus and Kevin Williams: The Dark Triad of Personality

Paulhus and Williams, when both at the University of British Columbia, Vancouver, Canada, introduced a three-factor approach to understanding the darker side of personality, which includes the following traits (2002):

- Narcissism: extreme selfishness, an inflated sense of one's abilities and talents, and the constant need for admiration and attention
- Machiavellianism: the tendency to manipulate others, characterized by cunning, deceitful, and unscrupulous behaviors
- Psychopathy: callous, insensitive, egocentric, antisocial, takes advantage of other people, using great charm and often violence

Assessing the Dark Triad

The original measures included three scales with over 90 items total. You can get a better idea of what people exhibiting these characteristics are like by considering the items in the so-called Dirty Dozen Scale, a short-form self-report measure developed as a quick way of assessing the Dark Triad (Jonason & Webster, 2010, p. 429). To what extent do you think each of the following items reflects your own personality, using a scale from 1 = *strongly disagree* to 9 = *strongly agree*?

1. I tend to manipulate others to get my way.
2. I have used deceit or lied to get my way.
3. I have used flattery to get my way.
4. I tend to exploit others toward my own end.
5. I tend to lack remorse.
6. I tend to be unconcerned with the morality of my actions.
7. I tend to be callous or insensitive.
8. I tend to be cynical.
9. I tend to want others to admire me.
10. I want others to pay attention to me.
11. I tend to seek prestige or status.
12. I tend to expect special favors from others.

Correlates of the Dark Triad

As you can imagine, people who score high in these "dark" traits are going to experience feelings, have thoughts, and behave much differently than people low in these traits. Those who scored high in Machiavellianism and psychopathy also scored low

on the Big Five factors of conscientiousness, agreeableness, and openness. In addition, they showed little empathy or consideration for others, a high level of aggression, a vengeful and unforgiving attitude, and low scores on emotional stability (Giammarco & Vernon, 2014; Muris et al., 2013; Oliveira, 2013b). Indeed, in a study of about 80 adults in Italy, those who scored high in the Dark Triad (Machiavellianism, psychopathy, and narcissism via the Dirty Dozen measure) were lower in the ability to recognize and describe their own feelings (alexithymia), theory of mind, and empathy (Schimmenti et al., 2019).

Studies have found that those who scored high on all three traits engaged in more antisocial activities and also derived greater satisfaction from the misfortune of others (James et al., 2014; Porter et al., 2014).

People high in the Dark Triad tend to self-promote and to be cold, duplicitous, and aggressive (Paulhus & Webster, 2010). Furthermore, people high in the Dark Triad traits tend to experience higher levels of envy, and this envy can drive antisocial behaviors toward others in the workplace (Lange et al., 2018). In a study of German employees from diverse occupations (e.g., from the automobile industry, tourism, business, education, and medical and health industry), people high in narcissism had higher salaries, leadership positions, and job satisfaction (Paleczek et al., 2018). Perhaps this is because people high in narcissism convinced others of how great they (think they) are or because their inflated self-esteem makes them resilient (e.g., Lisá & Valachová, 2023).

Another study found that the verbal content of subjects' Facebook updates was a valid predictor of their levels of psychopathy and narcissism. Their updates tended to be emotionally cold, aggressive, and highly self-promoting (Garcia & Silkstrom, 2014). Lack of ability to self-regulate may help explain these findings; indeed, people who are lower in self-control (a trait lacking in psychopathy) are more likely to use Facebook to carefully manage their persona and reputations and use the platform in maladaptive ways (Maranges et al., 2023).

The Dark Triad is associated with selfish tendencies in and preference for short-term relationships. The Dark Triad predicts deception and lower commitment in romantic relationships (as reviewed in Muñoz & De Los Reyes, 2021), as well as endorsement for keeping secrets from their partners (Muñoz & De Los Reyes, 2021). Psychopathy is also linked to a high sex drive with strong sexual and sadomasochistic themes and fantasies. People who scored high in psychopathy and narcissism engaged in a number of short-term sexual relationships with no intention of commitment (Adams et al., 2014; Baughman et al., 2014).

The Dark Triad may be linked to broader social attitudes too. For example, people high in psychopathy tend to hold negative attitudes toward multiculturalism, in contrast to people who are high in openness, as evidenced in a study of over 400 Turkish college students (Kayiş & Akcaoğlu, 2021).

Research, and likely common sense, demonstrates the risks of being interdependent with someone high in one or all of the Dark Triad traits—psychopathy, Machiavellianism, and narcissism.

Pause for Reflection

What are important differences among the Dark Triad traits, do you think? Do you see these traits in people around you? Characters in shows or movies?

Reflections on the Trait Approach

The theories presented in this chapter, together with their supporting research, indicate that inheritance may account for as much as 50 percent of personality (Brody, 1997; Buss, 1988; Stelmack, 1997). The evidence is greatest for the factors of extraversion, neuroticism, and psychoticism, but virtually every other dimension investigated by personality researchers displays a strong biological component.

In many cases, a shared family environment has only a minor influence. Some researchers hold a more uncompromising view, arguing that twins, whether reared together or apart, will be alike in all facets of their personality regardless of the family situation in which they were raised, suggesting that the genetic effect far outweighs the environmental effect.

This area of research has practical and theoretical implications for personality psychologists, who in the past tended to concentrate on the family and social interactions in early childhood. Findings from behavioral genetics may require a restructuring of research efforts in the future if we are to account fully for the development of personality.

However, we must not conclude prematurely that family and other environmental factors can be completely discounted as shapers of personality. The various components of personality are indeed products of both our genetic makeup and the experiences of our life. The task for psychologists remains to determine the relative importance of each.

DEI Spotlight

Trait Factor Theories and Diversity, Equity, and Inclusion

Personality trait theories focus on people's unique attributes as grouped into basic traits and how these traits shape or describe their thoughts, feelings, and behaviors. This has implications for how DEI concerns in the health domain might be addressed by knowledge of personality traits.

Individuals, Family, and Society. Here we talk about the implications of personality for coping with a challenge that has affected millions of people around the world but was disproportionately devastating for Black people: the global pandemic of COVID-19. This posed a problem for individuals and families of color that society overall must contend with. Details about the disease can be found elsewhere (e.g., WHO, https://www.who.int/emergencies/diseases/novel-coronavirus-2019).

During this pandemic, larger proportions of sick Black people died than did sick White people, especially in the United States. For example, in Chicago, Black people constituted approximately 70 percent of the COVID-19 deaths but made up only 29 percent of the city's population (Einhorn, 2020). Some researchers argue that part of this problem is unconscious bias-driven healthcare provider treatment of people of color who have COVID-19 (Milam et al., 2020). They cite a review of studies (Maina et al., 2018) that assessed implicit racial biases among healthcare providers: Three major themes related to health-care providers' implicit biases and patient interactions emerged: (1) the majority of health-care providers demonstrated implicit biases against African Americans; (2) African American health-care providers demonstrated lower implicit biases overall; and (3) stronger implicit biases among providers were associated with worse patient–provider communication.

Both direct effects, for instance, of doctors not treating people of color as well as their White patients, and indirect effects, such as the stress that racism causes people of color that undermines their immune systems and creates larger psychological burden with which they must cope, come into play here. Thus, some interventions for solving this problem include having healthcare providers take research-backed antibias training and having more Black healthcare providers. These solutions will take time to implement and are essential for the direct effects. What about the indirect effects? Coping can be adaptive and healthy—problem-focused; or it can be maladaptive and unhealthy—emotion-focused.

Personality science might have some answers that can be especially helpful for identifying risk factors at the intersection of race and personality. Specifically, research has found that people high in openness, extraversion, conscientiousness, and agreeableness and low in neuroticism tended to engage in problem-focused coping during the COVID-19 pandemic (Agbaria & Mokh, 2022). In contrast, those low in openness, extraversion, conscientiousness, and agreeableness and high in neuroticism tend to cope in emotion-focused ways that can increase anxiety. This research thus suggests that one way by which society can help solve the problem as it relates to indirect effects is to help those high in neuroticism learn to cope with problem-solving strategies rather than focus on their anxiety, such as by providing professional psychological support to complement medical support. Furthermore, in addition to doing the hard work to reduce their race-based implicit biases, healthcare providers may consider communicating with patients in ways that are consistent with their personalities (e.g., being calming for people high in neuroticism, sharing more details about the science of treatment with those high in openness). This work also highlights the essential role of social support to support healthy coping habits when it comes to something like a pandemic. Thus, families and communities can work to listen to and support each other so that social support is felt.

Chapter Summary

According to Cattell, factors, or traits, are the basic structural units of personality. We all possess the common traits to some degree; unique traits typify one or a few persons. Ability traits determine how efficiently we work toward a goal. Temperament traits define emotional style of behavior. Dynamic traits are concerned with motivation.

Surface traits are personality characteristics that correlate with one another but do not constitute a factor because they are not determined by a single source. The 16 source traits Cattell identified are single factors, and each is the sole source of some aspect of behavior. Source traits may be constitutional traits, which originate in internal bodily conditions insofar as they are directly based on or interact with biology, or environmental-mold traits, which derive from environmental influences. Cattell's research suggests that one-third of personality is genetically determined, with the rest determined by environmental influences. Thus, Cattell holds a deterministic view of personality. He does not suggest any ultimate life goals. Childhood influences are important in personality development, as are heredity and environment.

Cattell's three major assessment techniques are L-data (ratings made by observers), Q-data (self-ratings made through questionnaires, personality inventories, and attitude scales), and T-data (data from tests that are resistant to faking), as well as the P technique, which collects a large amount of data from a single subject over time. Cattell's work is highly technical, and the amount of supporting data is massive, relying on factor analyses.

Research on behavioral genetics finds a significant influence of genetic factors on personality, with heritability estimates higher than even Cattell concluded. Eysenck's personality model is of three traits he believes are biologically based: psychoticism, extraversion, and neuroticism.

McCrae and Costa proposed five biologically-based factors: extraversion, neuroticism, openness, agreeableness, and conscientiousness. Their work and that of Goldberg show the great explanatory value of these particular traits for understanding how people differ and are similar. Moreover, the factors are generally stable over the lifetime, appear in many cultures, and are valid predictors of feelings, thoughts, and behaviors as well as outcomes across virtually all domains of life.

HEXACO, a six-factor model of personality, adds the dimension of honesty/humility to the five-factor model. That factor has been documented in more than a dozen different cultures and seems to predict other-focused behaviors to a greater extent than can measures of the Five Factors.

The Dark Triad of personality includes narcissism, Machiavellianism, and psychopathy, which are associated with antisocial, duplicitous, and aggressive behavior.

Review Questions

1. According to Cattell, what are common versus unique traits?
2. Compare and contrast ability, temperament, and dynamic traits.
3. What are constitutional traits compared to environmental-mold traits?
4. What are the 16 source traits according to Cattell? For five of the traits, describe how they are related to feelings, thoughts, behaviors, or life outcomes.
5. Outline the six stages of development according to Cattell.
6. Describe how behavioral genetics research is done—what kind of studies does the method rely on?
7. Define heredity and heritability. Are traits hereditary? Are traits heritable?
8. Define each of the three traits in Eysenck's PEN personality model.
9. Compare and contrast the Big Five/Five-Factor model of personality to the PEN model.
10. Discuss how similar or different the presence and perception of personality is across cultures and gender. Focus on the five factors.
11. For each of the Big Five traits, list two life outcomes associated with that trait.
12. Explain what the honesty/humility factor of HEXACO is and how it is more predictive than the Big Five.
13. Define the Dark Triad traits.
14. What outcomes are the Dark Triad traits associated with?

Suggested Readings

- Buchanan, R. (2010). *Playing with fire. The controversial career of Hans Eysenck.* Oxford University Press. A thoughtful discussion of Eysenck's long and distinguished career and his work on the dimensions of personality.
- Cattell, R. B. (1974). Autobiography. In G. Lindzey (Ed.), *A history of psychology in autobiography* (Vol. 6, pp. 59–100). Prentice-Hall; Travels in psychological hyperspace. In T. S. Krawiec (Ed.), *The psychologists* (Vol. 2, pp. 85–133). Oxford University Press. Two essays by Cattell about his life and work.
- Cattell, R. B. (1993). Planning basic clinical research. In E. C. Walker (Ed.), *The history of clinical psychology in autobiography* (Vol. 2, pp. 101–111). Brooks/Cole. Cattel's evaluation of his life's work, concluding that his approach to the measurement of personality structures and processes was the only correct one to pursue.
- Eysenck, H. J. (1976). H. J. Eysenck. In R. I. Evans (Ed.), *The making of psychology: Discussions with creative contributors* (pp. 255–265). Alfred A. Knopf. Interviews with Eysenck about his work, especially his criticisms of psychoanalysis and his controversial views on the genetic basis of intelligence.
- Eysenck, H. J. (1990). Genetic and environmental contributions to individual differences: The three major dimensions of personality. *Journal of Personality, 58,* 245–261. Describes the relative impact of heredity and environment on Eysenck's proposed dimensions of personality (extraversion, neuroticism, and psychoticism) and emphasizes the importance to psychology of the study of behavioral genetics.
- Eysenck, H. J. (1997). *Rebel with a cause: The autobiography of Hans Eysenck.* Transaction Publishers. Eysenck's reflections on his life and work. Notes how some of his ideas on personality dimensions have stood the test of time, and suggests the relative importance of heredity versus environment in his own personality.
- Farley, F. (2000). Hans J. Eysenck (1916–1997). *American Psychologist, 55,* 674–675. An obituary article describing Eysenck's contributions to psychology.
- Horn, J. (2001). Raymond Bernard Cattell (1905–1998). *American Psychologist, 56,* 71–2. An obituary article describing Cattel's contributions to psychology.
- Lee, K., & Ashton, M. (2012). *The H factor of personality: Why some people are manipulative, self-entitled, materialistic, and exploitive—and why it matters for everyone.* Wilfred Laurier University Press. Covers the H Factor (honesty/humility) in the HEXACO model of personality and how it influences people in ways both good and bad, desirable and undesirable.
- Maranges, H. M., & Reynolds, T. A. (2020). Heritability of personality. In B. J. Carducci (Editor-in-Chief) & C. S. Nave (Vol. Ed.), *The Wiley-Blackwell encyclopedia of personality and individual differences: Vol. I. Models and theories.* John Wiley & Sons.
- Tucker, W. (2009). *The Cattell controversy: Race, science, and ideology*. University of Illinois Press. Examines Cattell's career, his use of the factor-analytic method, and his personal philosophy.

Part 5

The Humanistic Approach

The humanistic approach to personality flourished in the 1960s and 1970s and still continues to influence psychology today. The goal of this movement was to radically change psychology's methods and focus. Humanistic psychologists objected to psychoanalysis and to behaviorism (a theoretical account of human nature as being based in learning or training of behavior), which were then the two major forces in American psychology, arguing that they presented too limited and demeaning a characterization of human nature.

Humanistic psychologists criticized Freud and other psychoanalysts for studying only the distressing side of human nature. They questioned how we could ever learn about positive human characteristics and qualities if we limited our focus to the experience of negative thoughts, feelings, and experiences. Instead, humanistic psychologists proposed to study our strengths and virtues—the best of human character, not its worst.

The humanistic psychologists believed that behavioral psychologists were too narrow in their outlook because they disavowed conscious and unconscious forces, dealing instead only with the objective observation of overt behavior. Specifically, humanists argued that a psychology based on conditioned responses to stimuli depicts people as little more than mechanized robots, reacting to events in predetermined ways. Humanistic psychologists insisted that people were not merely laboratory rats or slow computers. Human personality is too complex to be explained solely by the behaviorists' methods.

The humanistic approach to personality is represented here by the works of Abraham Maslow and Carl Rogers. Their theories emphasize human strengths and aspirations, conscious free will, and the fulfillment of human potential. They present a flattering and optimistic perspective on human nature and describe us as active, creative beings concerned with growth and self-actualization.

Chapter 9

What humans can be, they must be. They must be true to their own nature. —Abraham Maslow

Abraham Maslow: Needs-Hierarchy Theory

Learning Objectives

9.1 Compare and contrast Maslow's theory with that of psychoanalysts and developmental stage theorists, providing three examples of similarities and differences.

9.2 Describe Maslow's hierarchy of needs.

9.3 Identify the Five-Factor personality traits that are associated with needs in Maslow's hierarchy.

9.4 Summarize in four sentences research findings about self-esteem.

9.5 List the conditions necessary for self-actualization according to Maslow.

9.6 Describe the personality traits of self-actualized people according to Maslow.

9.7 Analyze the role of cognitive needs in personality.

9.8 Outline Ryan and Deci's self-determination theory and three needs.

9.9 Compare and contrast intrinsic and extrinsic motivation.

9.10 Summarize the psychological needs view of personality in five sentences.

Abraham Maslow is considered the founder and spiritual leader of the humanistic psychology movement. He objected to both behaviorism and psychoanalysis, particularly Freud's approach to personality. According to Maslow, when psychologists study only negative experiences of humanity, they ignore all the positive human qualities such as lovingness, generosity, and happiness.

We underestimate human nature, Maslow charged, when we fail to examine the best in people, that is, the most creative, psychologically healthy, and mature individuals. Therefore, Maslow decided that his approach to personality would assess society's outstanding representatives. When you want to determine how fast people

can run, he reasoned, you study not the average runner but the fastest runner you can find.

Only in this way is it possible to determine the full range of human potential. His theory does not derive from case histories of clinical patients but from research on creative, independent, self-sufficient, fulfilled adults. He concluded that each person is born with the same set of instinctive needs that enable us to grow, develop, and fulfill our potential.

The Life of Maslow (1908–1970)

A Miserable Childhood

The oldest of seven children, Maslow was born in 1908 in Brooklyn, New York. His parents were Jewish immigrants from Russia with little education and few prospects of rising above their impoverished circumstances. Maslow's childhood was not pleasant. He told an interviewer, "with my childhood, it's a wonder I'm not psychotic" (quoted in Hall, 1968, p. 37). In a statement found in his unpublished papers years after his death, Maslow had written, "My family was a miserable family and my mother was a horrible creature" (quoted in Hoffman, 1996, p. 2).

Isolated and unhappy, he grew up without close friends or loving parents. His father was aloof and periodically abandoned his family. Maslow said that his father "loved whiskey and women and fighting" (quoted in Wilson, 1972, p. 131). Eventually Maslow reconciled with his father, but as a child and adolescent he felt anger and hostility toward him.

Maslow's relationship with his mother was even worse. A biographer reported that Maslow "grew to maturity with an unrelieved hatred toward [her] and he never achieved the slightest reconciliation" (Hoffman, 1988, p. 7). According to Maslow, she openly favored his younger siblings, never behaved with the slightest sign of affection for him, and constantly punished him for the smallest wrongdoing.

When Maslow once brought home two stray kittens, his mother treated them cruelly, as he perceived she often treated him. Maslow never forgave her for the pattern of extremely harsh parenting, and when she died many years later, he refused to go to her funeral. The experience affected not only his emotional life but also his work in psychology. "The whole thrust of my life-philosophy, and all my research and theorizing . . . has its roots in a hatred for and revulsion against everything she stood for" (quoted in Hoffman, 1988, p. 9).

Alone in the World

As if coping with the stress from his relationship with his mother were not difficult enough, Maslow faced other problems. He explains he grew to be self-conscious about his large nose and small body, largely because of his parents' mean comments. His parents taunted him about his appearance and often told him how unattractive and awkward he was. At a large family gathering, Maslow recalls his father pointing to him and saying, "Isn't Abe the ugliest kid you've ever seen?" (quoted in Hoffman, 1996, p. 6).

He remembered his teenage years as marked by an inferiority complex. "I was all alone in the world," Maslow told an interviewer. "I felt peculiar. This was really in my blood, a very profound feeling that somehow I was wrong. Never any feelings that I was superior. Just one big aching inferiority complex" (quoted in Milton, 2002, p. 42). Elsewhere he wrote, "I tried to compensate for what I felt was a great [physical] lack by forcing my development in the direction of athletic achievements" (quoted in Hoffman, 1988, p. 13). Thus, the man who would later become interested in Alfred Adler's work was a living example of Adler's concept of compensation for inferiority feelings.

Finding a New Style of Life

When Maslow's early attempts at compensation to achieve recognition and acceptance as an athlete did not succeed, he turned to books. The library became the playground of his childhood and adolescence, and reading and education became both his focus and a means by which he would build well-being, social support, and a career that afforded him more resources than in his childhood.

Maslow's early memories are significant because they previewed the style of life, the life of scholarship, he would fashion for himself. He recalled going to the neighborhood library early in the morning and waiting on the steps until the doors opened. He typically

arrived at school an hour before classes began, and his teacher would let him sit in an empty classroom reading books she loaned him.

Although his grades remained average, they were good enough to be accepted at City College of New York. He failed a course during his first semester and by the end of his freshman year was on academic probation. But he persisted, and over time his grades improved. He began to study law at his father's request but decided after two weeks that he did not like it. What he really wanted to do was study "everything."

Becoming a Behaviorist

Maslow's desire for learning was matched by his great passion for his cousin Bertha. He soon left home, first for Cornell and then for the University of Wisconsin, where she joined him. He was 20 and she was 19 when they married. (Romantic relationships with far-removed relatives were less rare and more socially acceptable at that time.) Their relationship provided Maslow with a feeling of belonging and a sense of direction. He later said that his life had little meaning until he married Bertha and began his studies at Wisconsin. At Cornell, he had enrolled in a psychology course and pronounced it "awful and bloodless." It had "nothing to do with people, so I shuddered and turned away from it" (quoted in Hoffman, 1988, p. 26).

At the University of Wisconsin, however, he found the behavioral psychology of John B. Watson, leader of the revolution to make psychology a science of behavior. Like many people in the early 1930s, Maslow became enraptured, believing that behaviorism could solve all the world's problems. His training in experimental psychology included work on dominance and sexual behavior in primates. It was a giant step from this type of research in the behaviorist framework to developing the ideas of humanistic psychology—from monkeys to self-actualization.

From Monkeys to Self-Actualization

Several influences brought about this profound shift in his thinking. He was deeply affected by the onset of World War II and by the birth of his first child. About his first child, he said, "I was stunned by the mystery and by the sense of not really being in control. I felt small and weak and feeble before all this. I'd say anyone who had a baby couldn't be a behaviorist" (quoted in Hall, 1968, p. 56).

Maslow received his PhD from the University of Wisconsin in 1934 and returned to New York for a postdoctoral fellowship working with E. L. Thorndike at Columbia University, and later to teach at Brooklyn College, where he remained until 1951. Maslow took several intelligence and scholastic aptitude tests, scoring an IQ of 195, which Thorndike described as within the genius range. At first Maslow was surprised, but soon he accepted the revelation and thereafter considered it a triumph. He often managed to work the information about his high IQ into social conversations.

A Parade Changes His Life

Teaching in New York in the late 1930s and early 1940s, Maslow had the opportunity to meet the wave of intellectuals fleeing Nazi Germany and immigrating to the United States, including Karen Horney and Alfred Adler. Maslow "talked about Adler all the time and was tremendously excited by his theories" recalled Bertha Maslow (quoted in Hoffman, 1988, p. 304). He also met the Gestalt psychologist Max Wertheimer and the American anthropologist Ruth Benedict. His admiration for the work of Wertheimer and Benedict later kindled his ideas about self-actualization.

In 1941, Maslow witnessed a parade shortly after Japan's surprise attack on the American naval base at Pearl Harbor in Hawaii, precipitating U.S. involvement in World War II. The experience changed his thinking, and he resolved to devote himself to developing a psychology that would deal with the highest human ideals. He would work to improve the human personality and to demonstrate that people are capable of displaying better behavior than prejudice, hatred, and violence.

Becoming Famous

From 1951 to 1969, Maslow taught at Brandeis University in Massachusetts. A foundation grant enabled him to move to California to work on his philosophy of politics, economics, and ethics based on a humanistic psychology. He became an immensely popular figure in psychology and among the general public. He received many awards and honors and was elected president of the American Psychological Association in 1967.

At the peak of his fame, Maslow developed a variety of physical ailments, including stomach disorders, insomnia, depression, and heart disease. In the face of these growing physical limitations, he pushed himself to work even harder to accomplish his goal of humanizing psychology. "I find myself getting narrow," he said in a 1968 interview. "I've given up plays and poetry and making new friends. . . . I love my work so much, and am so absorbed with it, that everything else starts to look smaller and smaller" (quoted in Frick, 2000, p. 135). Maslow died in 1970 of a heart attack while jogging around his swimming pool.

Pause for Reflection

What personality traits do you think Abraham Maslow had that allowed him to overcome the stress of his childhood?

Personality Development: The Hierarchy of Needs

Maslow proposed a **hierarchy of needs** that activate and direct human behavior (1968, 1970b). They are the (1) physiological, (2) safety, (3) belongingness and love, (4) esteem, and (5) self-actualization needs, as represented in Figure 9.1. Maslow described these needs as **instinctoid needs**, by which he meant that they have a hereditary component. Although we come equipped with these needs at birth, the behaviors we use to satisfy them are learned and, therefore, subject to variation from one person to another. The existence of these five needs in humans has inspired and been supported by decades of research (e.g., Graham & Balloun, 1973; Beall & Tracy, 2017).

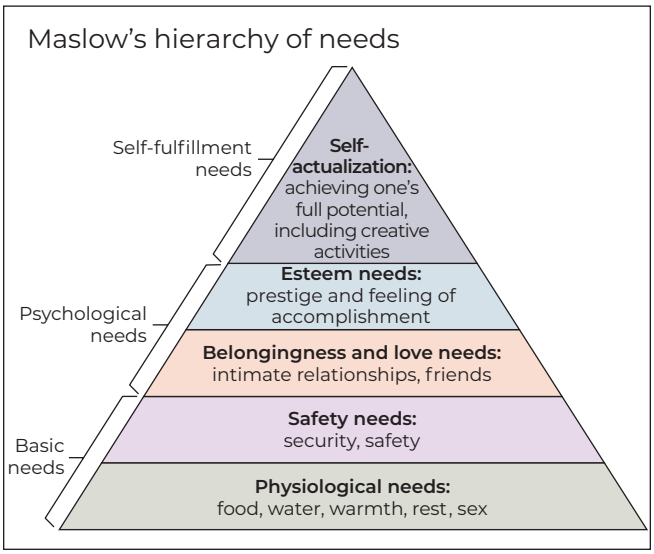
The needs are arranged in order from strongest, or most basic, at the bottom to the weakest, or those that are a relative luxury and rarity in terms of being able to accomplish them, at the top. Lower needs must be at least partially satisfied before higher needs become influential or satisfied. For example, hungry people feel no urge to satisfy the higher need for esteem. They are preoccupied with satisfying the physiological need for food, not with obtaining approval and esteem from other people. It is only when people have adequate food and shelter, and when the rest of the lower needs are satisfied, that we are motivated by needs that rank higher in the hierarchy.

Thus, we are not driven by all the needs at the same time. In general, only one need will dominate our personality at any one point in time, Maslow argued. Which one it will be depends on which of the others have been satisfied. For example, people who are successful in lucrative careers are likely no longer driven by their physiological and safety needs. Those needs have been amply taken care of insofar as they make enough money to afford food and safe shelter. They are then in a position to be motivated by the needs for esteem or self-actualization. In contrast, a person whose job does not pay a living wage that allows them to meet their basic needs, and are thus motivated by basic needs, do not have the luxury to worry about esteem from others.

Characteristics of Needs

- The lower the need is in the hierarchy, the greater its strength, potency, and priority. The higher needs are weaker needs.
- Higher needs appear later in life. Physiological and safety needs arise in infancy. Belongingness and esteem needs arise in adolescence. The need for self-actualization does not arise until midlife.
- Because higher needs are less necessary for actual survival, their gratification can be postponed. Failure to satisfy a higher need does not produce a crisis. Failure to satisfy a lower need, on the other hand, does produce a crisis. For this reason, Maslow called lower needs **deficit, or deficiency, needs**; failure to satisfy them produces a harmful deficit.
- Although higher needs are less necessary for survival, they can contribute to our personal growth. Satisfaction of higher needs leads to improved health, happiness, contentment, fulfillment, and longevity. For this reason, Maslow called higher needs **growth, or being, needs**.

Figure 9.1



hierarchy of needs An arrangement of five innate needs, from most basic for survival to those associated with personal growth, that activate and direct behavior.

instinctoid needs Maslow's term for the innate needs in his needs-hierarchy theory.

deficit (deficiency) needs The lower needs; failure to satisfy them can harm the individual's body and well-being.

growth (being) needs The higher needs; although growth needs are less necessary than deficit needs for survival, they involve the realization and fulfillment of human potential.

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One important physiological need is for food. If this need is not met, an individual will lack wellness and the luxury to pursue other higher needs.

- Gratification of higher needs requires more privilege in terms of external social, economic, and political circumstances than does gratification of lower needs. For example, pursuing self-actualization requires relative wealth and a social position that permits greater freedom of expression.
- A need does not have to be satisfied fully before the next need in the hierarchy becomes important. Maslow proposed a declining percentage of satisfaction for each need. Offering a hypothetical example, he described a person who satisfied, in turn, 85 percent of the physiological needs, 70 percent of the safety needs, 50 percent of the belongingness and love needs, 40 percent of the esteem needs, and 10 percent of the self-actualization need.

Basic Needs

Physiological and safety needs are considered basic needs. They are necessary for survival and must be met before other needs will motivate behavior or can be satisfied. If you have ever been unsure whether you are safe, or if you have gone too long without eating or drinking, you can understand how trivial the needs for love or esteem or anything else can be when your body is experiencing a basic need.

Physiological Needs

Physiological needs include food, water, sex, and sleep. A person experiencing starvation will be driven primarily to satisfy the need for food. But once that need is satisfied, the person is no longer driven by it. If food can be guaranteed, the need then ceases to direct or control behavior. Although for most people in industrialized nations, physiological needs are met, this is not the case for everyone within those nations or around the world. For example, more than 10 percent of households in the United States experience food insecurity (USDA, 2022).

When basic needs aren't met, physical and mental health can suffer, undermining people's ability to pursue other higher-level goals. In a study of almost 9,000 college students in the U.S. state of California, the higher the student's food insecurity, the worse their mental health, and as a result, grade point average (Martinez et al., 2020). Consistent with Maslow's theory, some health psychologists have pointed out how important sexual functioning is for people's well-being across the life span (Diamond & Huebner, 2012). In a huge study with tens of thousands of respondents across 123 countries, researchers found that when people's physiological (and other basic) needs were met, they experienced higher levels of subjective well-being (e.g., higher positive life evaluation, positive feelings, and fewer negative feelings) (Tay & Diener, 2011).

Acknowledging the physiological needs of others who do not have the resources to meet those needs is essential for motivating prosocial behaviors to help them. In a set of six studies, researchers find that one way by which people dehumanize others is by perceiving their physiological needs as lower than they really are or as lower than one's own needs, which in turn demotivates helping them (e.g., people without housing) (Schroeder & Epley, 2020).

Safety Needs

Maslow believed that the needs for safety and security are important drives across the life span. This idea has received strong support from social cognitive research based on the Dual Implicit Process Model (March et al., 2018) finding that people respond fastest and strongest to stimuli suggesting physical threats to safety than to other types of stimuli, at both the conscious and unconscious levels (March et al., 2017, 2022). Safety needs are primary to infants regardless of external factors. The safety of children's environments shapes their development in important ways. For example, people who experienced safer environments (e.g., neighborhoods) as children develop higher levels of agreeableness, honesty-humility, altruism, endorsement of the principle of care, and empathic responding to the plights of others in need, and they engage in more charitable giving than those who experienced less safety (McCauley & McCullough, 2022).

Adults are able to navigate their environment to avoid danger. Some evidence suggests that adult men have a relative strength in detecting threats to their safety, whereas adult women have a relative strength in responding to threats to their safety on average (March & Gaertner, 2022). For everyone, satisfaction of safety needs—a condition that requires financial resources, stability, security, and freedom from fear and anxiety—is essential for physical and psychological well-being.

Another visible indication of children's safety needs is their preference for a structure or routine, for an orderly and predictable world. Too much freedom and permissiveness leads to an absence of structure and order, Maslow argued. This situation is likely to produce anxiety and insecurity in children because it threatens their security. According to Maslow, some measure of freedom must be granted to children, but only within the limits of their capacity to cope. This freedom must be offered with guidance because children are not yet capable of directing their own behavior and realizing the consequences. Indeed, unpredictability in childhood has been associated with a lack of physical and psychological well-being and maladaptive behaviors such as disinhibition, callous aggression, and substance use (e.g., Glynn et al., 2019; Martinez et al., 2022; Zhou et al., 2020).

Much research suggests that basic needs—such as for food and safety—must be met before other needs become a priority. Research on economically disadvantaged youth in the Midwestern United States found that they were primarily focused on trying to satisfy their safety needs and demonstrated little concern for higher needs (Noltemeyer et al., 2012). A study of more than 40,000 people in 123 countries supported Maslow's view that the basic physiological and safety needs must be satisfied before people can achieve fulfillment and happiness (Tay & Diener, 2011). Other studies have found that the more the basic needs are satisfied, the greater the chances that the higher needs will also be satisfied, and that people older than 36 are far more likely to achieve self-actualization than those who are younger (Taormina & Gao, 2013; Ivtzan et al., 2013).

The personality trait of neuroticism and the experience of anxiety and depression may have their foundations in a sensitive safety need system, whether sensitized by internal or external factors. For example, people whose basic needs are met report lower levels of neuroticism and depression (e.g., Lester, 1990; Williams & Page, 1989). As another example, during the COVID-19 pandemic, many economic sectors shut down to prevent spread of the disease, and as a result, many people lost their jobs and ability to pay for safe housing. Concerns about job insecurity during that pandemic were associated with higher levels of anxiety and depression (e.g., Obrenovic et al., 2021).

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The second type of basic need is for safety from threat. One's childhood home can provide a source of or a lack of safety, security, and predictability for a child.

Maslow pointed out that although most adults have satisfied the safety needs, those needs may still have an impact on behavior. (Of course, such an observation may be limited to privileged people in industrialized nations). Many of us choose the predictable over the unknown and prefer order to chaos. That is why we save for the future, buy insurance, and opt to remain in a secure job rather than risk a new venture. Such a cluster of behavior reflects the adaptive value of conscientiousness.

Pause for Reflection

Why do you think the basic needs must be met first? Have there been times when you have had to focus on meeting these needs?

Psychological Needs

Once basic needs are met, the drive for psychological needs to be met will motivate behavior. Psychological needs include the need for belongingness and love as well as for esteem.

Belongingness and Love Needs

Once our physiological and safety needs have been reasonably well satisfied, we attend to the needs for belongingness and love. These needs can be expressed through a close relationship with family, friends, social groups, or

romantic partners. Maslow's proposed need for belongingness can only be satisfied through association with—and, more important, acceptance by—other people.

The need to give and receive love can be satisfied in an intimate relationship with another person. Maslow did not equate love with sex, which is a physiological need, but he recognized that sex is one way of expressing the love need. He suggested that the failure to satisfy the need for love is a fundamental cause of psychological distress.

Feelings of belonging drive our decisions across life contexts. For example, university students' decisions of what subject to major in largely depends on their feelings of belonging (e.g., Good et al., 2012; Maranges et al., 2023). In one study in the United States and Canada, women's tendency to major in psychology over philosophy was in part attributed to their feeling they belonged more in psychology versus philosophy (Maranges et al., 2023).

In a study with over 600 Asian American university students, low levels of belongingness predicted high levels of interpersonal shame, which were associated with higher levels of depression at a later time (Carrera & Wei, 2017). Bolstering people's feelings of belonging can help support mental health and academic performance, especially for minoritized students who face unique challenges in college (Walton & Cohen, 2011). An analysis of an archival data set from the Harvard Student Study demonstrated that the men with higher extraversion had stronger feelings of belonging, larger social networks, and more well-being years later (Harris et al., 2017).

In modern times, people can seek out feelings of belonging via technology and social media. A scale to assess to what extent the technology of smartphones support belongingness needs has even been developed: The Smartphone Basic Needs Scale (SBNS) is a 20-item self-report inventory designed to assess the degree to which smartphone use can satisfy the needs in Maslow's system. It was developed with college students in the United States and in South Korea as participants and the developers reported high levels of validity and reliability (Kang & Jung, 2014). For example, the following items were used to measure Maslow's belongingness need—respondents were instructed to select the statement or statements that applied to them:

By using my smartphone, I can . . .

1. Get closer to important people around me
2. Meet nice people
3. Develop relationships with others
4. Get along with people well
5. Work and communicate together

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When the human need for belonging and love is met, people experience more well-being.

On the SBNS, the better people's needs were met, the more satisfaction in life they experienced (Kang & Jung, 2014). Seeking belonging on social media, however, can have counterproductive results, such as low self-esteem as a result of social comparisons (Maranges et al., 2023). Feelings of social exclusion online also have effects on people's cognitive processes and memory. For example, in one study, American college students who experienced social rejection online (i.e., no one from a [fake, unbeknownst to them] chat room responded to their messages or replied to their comments and questions) were more likely to recall social events from another student's (also fake) diary than did students who had social interactions in the chat room. The researchers concluded that failure to satisfy the need to belong can influence a cognitive activity such as memory and affect the type of events a person will recall (Gardner et al., 2000). When another group of college students were led to believe that they had been excluded or rejected by members of an online chat room, they reported lower levels of self-esteem, control, and belongingness than students who had not been told they had been ostracized (Smith & Williams, 2004). Feelings of belonging are not only associated with psychological health, but also physical health (e.g., Begen & Turner-Cobb, 2012).

Esteem Needs

Once we feel loved and have a sense of belonging, we may find ourselves driven by two forms of the need for esteem. We require esteem and respect from ourselves, in the form of feelings of self-worth, and from other people, in the form of status, recognition, or social success. Satisfaction of the need for self-esteem allows us to feel confident of our strength, worth, and adequacy, which will help us become more competent and

productive in all aspects of our life. When we have lower self-esteem, we feel inferior, helpless, and discouraged with little confidence in our ability to cope.

We can thus define **self-esteem** as the extent to which one has a positive self-concept, which can include perceptions of one's abilities, accomplishments, and characteristics. Decades of research have focused on the antecedents and consequences of self-esteem, a characteristic we all possess to some degree or another.

Research supports Maslow's position that people higher in self-esteem have greater self-worth and self-confidence. People high in self-esteem tend to perceive themselves to be significantly higher in intellectual skills, agreeableness, and morality and to be more extraverted, than those low in self-esteem (Campbell et al., 2002).

Antecedents of Self-Esteem

A study of adolescents in Canada in the 7th, 9th, and 11th grades found that more than one-third reported that their perceived physical appearance (i.e., how attractive they thought they were) was associated with their level of self-esteem. The results also indicate that teenagers who were more concerned with their appearance reported lower self-esteem than those who were less concerned with their appearance. No differences were found between boys and girls on these variables (Seidah & Bouffard, 2007). Inability to achieve self-esteem goals, such as high grades in school or success on the job, can lead to increased anger, shame, sadness, and feelings of worthlessness (Crocker & Park, 2004).

Other- and Self-Esteem

People who measured low in self-esteem and who had been led to believe they had been deliberately excluded from a laboratory group by the other members reported a significantly greater feeling of rejection than did people who measured high in self-esteem, suggesting that esteem from the self and others combine to shape how people feel (Nezlek et al., 1997). Indeed, a study of Italian university students found that people who based their self-worth on others' approval were more likely to self-monitor and be concerned about their social reputations (Cavazza et al., 2014).

Outcomes Associated with Self-Esteem

Young adults in the United States and in Canada who measured high in self-esteem were much more likely to participate in school sports and to have lower levels of anxiety and defensive behaviors than those who scored low (Bowker, 2006; Pyszczynski et al., 2004). Large-scale research programs in several countries, including the United States, Iceland, Canada, China, Norway, and New Zealand, found that low self-esteem was related to anxiety, depression, smoking addiction, school dropout rates, criminal convictions, financial problems, strong emotional reactions to negative outcomes, and difficulties at work (Brown, 2010; Cai et al., 2009; Donnellan et al., 2005; Jonsdottir et al., 2008; Moksnes et al., 2010; Trzesniewski et al., 2006).

College students who reported lower self-esteem spent more time on Facebook and other social networking sites than those who had higher self-esteem (Kalpidou et al., 2011; Mehdizadeh, 2010; Vogel et al., 2014). And college students placed a far greater value on activities that boosted their self-esteem, such as praise or high grades, than they did on eating a favorite food, drinking alcohol, spending time with a friend, getting a paycheck, or having sex (Bushman et al., 2011; Salamon, 2011).

Among college students applying for jobs, those with high self-esteem received more job offers and were rated more favorably by recruiters than were students with low self-esteem (Ellis & Taylor, 1983). German adults with higher self-esteem were more likely to have high subjective well-being and be married (Wagner et al., 2014). This may have to do with the difference in behavior of people high and low in self-esteem. People with low self-esteem may think and act in self-defeating ways that "diminish their quality of life" (Swann et al., 2007, p. 92).

Well-Being and Self-Esteem

People with high self-esteem are able to cope more effectively with the difficulties of job loss than those with low self-esteem (Shamir, 1986). Research in Canada and in China found that people with low self-esteem experience more physical health problems and more anxiety about death than those with high self-esteem (Routledge et al., 2010; Stinson et al., 2008). College students low in self-esteem experienced significantly more social problems of adjustment and getting along with other people than those high in self-esteem (Crocker & Luhtanen, 2003).

Stability of Self-Esteem over Time

Research suggests that self-esteem increases from younger to older age. Self-esteem tends to increase during adolescence and adulthood, peaking at approximately age 60, and then declining (Gentile et al., 2010; Orth & Robins, 2014; Orth et al., 2010). Research in Taiwan, however,

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self-esteem The extent to which one has a positive self-concept.

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Esteem can come from others (status) or from the self (self-esteem). Self-esteem entails having a positive self-concept.

found that self-esteem increased throughout childhood, adolescence, and early adulthood but changed very little after age 30 (Huang, 2010b).

Racial, Ethnic, and Cultural Diversity and Self-Esteem Self-esteem results from a complex combination of traits and experiences and cultural norms. Studies have found that Black teenagers tend to report higher self-esteem than White teenagers. Self-esteem has been shown to increase for Black people throughout adulthood but to decline more steeply than for White people after age 60 (Shaw et al., 2010). Self-esteem among Black women college students seems to be much higher among those who identify strongly with Black culture (Eaton et al., 2010). However, Black college students who feel they are incompetent or inadequate, despite evidence to the contrary, score high in stress and low in self-esteem (Peteet et al., 2014).

Cultural and ethnic differences have also been documented in self-esteem in comparative studies across more than 50 countries. College students in Japan consistently scored the lowest in self-esteem among all the nations surveyed, but this may have to do with cultural norms of modesty in Eastern versus Western cultures (Schmitt & Allik, 2005; Tafarodi et al., 2011; Yamaguchi et al., 2007). Asian American college students generally reported lower self-esteem than European Americans. However, Asian American students who felt they had greater social connections in their dorms or residence halls scored higher in self-esteem than those who did not (Fong & Mashek, 2014). Again, such findings may also have to do with cultural differences in self-enhancement.

Feeling strongly connected to one's cultural identity can support individuals' self-esteem. For example, among first-generation Mexican immigrants to the United States, those who felt the greatest pressure to adopt the practices of American culture experienced lower self-esteem than those who did not feel such pressure (Kim et al., 2014). A study in the Netherlands found that among immigrants from Turkey and from Morocco, people who identified more strongly with their ethnic background had greater self-esteem than those who did not (Verkuyten, 2009). Similar results were found among U.S. immigrants from Puerto Rico; the stronger their ethnic identity, the greater their self-esteem (Lopez, 2008).

Pause for Reflection

What personality traits make it more or less likely for an individual to meet their psychological needs of belongness/love and esteem?

The Self-Actualization Need

The highest need in Maslow's hierarchy, **self-actualization**, involves the maximum realization and fulfillment of an individual's potential, talents, and abilities. Maslow suggested that although a person may satisfy all the other needs in the hierarchy, if that person is not self-actualizing, they will be restless, frustrated, and discontent. Maslow wrote, "A musician must make music, an artist must paint, a poet must write . . . to be ultimately at peace" (1970b, p. 46).

The self-actualizing process may take many forms, but Maslow believed that everyone, regardless of occupation or interests, is capable of maximizing personal abilities and reaching the fullest personality development. Self-actualization is not limited to creative and intellectual superstars such as musicians, artists, and writers. What is important is to fulfill one's own potentials, whatever they are, at the highest level possible. Maslow put it this way, "A first-rate soup is more creative than a second-rate painting . . . cooking or parenthood or making a home could be creative, while poetry need not be" (1987, p. 159).

Conditions for Achieving Self-Actualization

The following conditions are necessary in order for us to satisfy the self-actualization need, according to Maslow:

- We must be free of constraints imposed by society and by ourselves.
- We must not be distracted by the lower-order needs.

self-actualization The highest need in Maslow's model, the fullest development of the self.

- We must be secure in our self-image and in our relationships with other people, and we must be able to love and be loved in return.
- We must have a realistic knowledge of our strengths and weaknesses, virtues and vices.

As you may notice, the opportunity to self-actualize comes only with relative privilege—financial and resource stability, freedom from constraints (which are inevitable with most occupations), and independence.

Pause for Reflection

If you could ensure all your basic and psychological needs are met and pursue self-actualization, in what domain would you pursue it (e.g., arts, sciences, philanthropy, athletics)?

Achieving Self-Actualization with Need Trade-Offs

Although the hierarchy of needs Maslow proposed applies to most of us, there can be exceptions. Some people dedicate their lives to an ideal and willingly sacrifice everything for their cause. People have been known to fast until death in the service of their beliefs, thus denying their physiological and safety needs. Religious figures may abandon all worldly goods to fulfill a vow of poverty, thus satisfying the self-actualization need while frustrating the lower-order needs. Artists throughout history have imperiled their health and security for the sake of their work. A more common reversal in the hierarchy occurs when people place a greater importance on esteem than on love, believing that the belongingness and love needs can be satisfied only if they first feel self-confident.

Motivations of Self-Actualizers

According to Maslow's theory, self-actualizers differ from others in terms of their basic motivation. Maslow proposed a distinct type of motivation for self-actualizers which he called **metamotivation** (sometimes called B-motivation or Being). The prefix *meta-* means "after or beyond." Metamotivation, then, indicates that it goes beyond psychology's traditional idea of motivation.

Metamotivation implies a condition in which motivation, as we know it, plays no role. Self-actualizers are not motivated to strive for a particular goal. Instead, they are said to be developing from within. Maslow described the motivation of people who are not self-actualizers as a condition of D-motivation or Deficiency. D-motivation involves striving for something specific to make up for something that is lacking within us. For example, inability to eat produces a deficiency in the body that we feel as discomfort. This feeling motivates us to take some action to reduce the resulting tension.

Thus, a specific physiological need (hunger) that requires a specific goal object (food) produces a motivation to act to attain something we lack (we search for food). Maslow's (1971) writing about the development of B-motivation and D-motivation is incomplete, but apparently D-motivation applies not only to physiological needs, as in this example, but also to safety, belongingness and love, and esteem needs.

Fulfilling Potential

In contrast, self-actualizers are concerned with fulfilling their potential and with knowing and understanding their environment. In their state of metamotivation, they are not seeking to reduce tension, satisfy a deficiency, or strive for a specific object. Their goal is to enrich their lives by acting to increase tension so as to experience a variety of stimulating and challenging events. Because their lower-order deficiency needs have been met, self-actualizers function at a level beyond striving for specific goal objects to satisfy a deficit. Thus, they are in a state of "being," spontaneously, naturally, and joyfully expressing their full humanity.

However, it is hard to imagine what form fulfilling potential takes if not in the form of specific goals or how other people view our successes. Indeed, in three studies with around 1,300 U.S. adults, people most often perceive self-actualization to be linked to status or seeking esteem from others (Krems et al., 2017).

Metaneeds

Having explained that self-actualizers are thus, in a sense, unmotivated, Maslow proposed a list of **metaneeds** toward which self-actualizers grow (refer to Table 9.1). Metaneeds are states of being and virtues—such as goodness, uniqueness, and perfection—rather than specific goal objects. You can think of these as the personality traits that self-actualized people strive toward and embody.

metamotivation The motivation of self-actualizers, which involves maximizing personal potential rather than striving for a particular goal object.

metaneeds States of growth or being (personality traits and virtues) toward which self-actualizers develop.

Table 9.1 Maslow's metaneeds and metapathologies

Metaneeds	Metapathologies
Truth	Mistrust, cynicism, skepticism
Goodness	Hatred, repulsion, disgust, reliance only upon self and for self
Beauty	Vulgarity, restlessness, loss of taste, bleakness
Unity, wholeness	Disintegration
Dichotomy-transcendence	Black/white thinking, either/or thinking, simplistic view of life
Aliveness, process	Deadness, robotizing, feeling oneself to be totally determined, loss of emotion and zest in life, experiential emptiness
Uniqueness	Loss of feeling of self and individuality, feeling oneself to be interchangeable or anonymous
Perfection	Hopelessness, nothing to work for
Necessity	Chaos, unpredictability
Completion, finality	Incompleteness, hopelessness, cessation of striving and coping
Justice	Anger, cynicism, mistrust, lawlessness, total selfishness
Order	Insecurity, wariness, loss of safety and predictability, necessity for being on guard
Simplicity	Overcomplexity, confusion, bewilderment, loss of orientation
Richness, totality, comprehensiveness	Depression, uneasiness, loss of interest in the world
Effortlessness	Fatigue, strain, clumsiness, awkwardness, stiffness
Playfulness	Grimness, depression, paranoid humorlessness, loss of zest in life, cheerlessness
Self-sufficiency	Responsibility given to others, dependence
Meaningfulness	Meaninglessness, despair, senselessness of life

Source: Adapted from *The Farther Reaches of Human Nature,* by A. H. Maslow. Copyright © 1971 by Bertha G. Maslow.

Failure to satisfy metaneeds is harmful and produces a kind of **metapathology**, which thwarts the full development of the personality. Metapathology prevents self-actualizers from expressing, using, and fulfilling their potential. They may come to feel helpless and depressed, unable to pinpoint a source for these feelings or identify a goal that might alleviate the distress, according to Maslow.

Scores on the Meta Needs Questionnaire (MNQ) were associated with anxiety and depression in ways that Maslow would have predicted (Groeger, 2012). Specifically, the higher people report their metaneeds, the less anxiety and depression symptomatology they experience.

metapathology A thwarting of self-development related to failure to satisfy the metaneeds.

Pause for Reflection

How do the metaneeds correspond to other models of personality (e.g., the Big Five traits)? To your personality?

Characteristics of Self-Actualizers

Maslow's research on people with psychological well-being and fulfillment formed the basis of his personality theory (1970b, 1971). He did not find many examples of self-actualizers and estimated that they constitute 1 percent or less of the population. However, he concluded that they share certain characteristics (summarized also in Table 9.2):

- *An efficient perception of reality.* Self-actualizers perceive their world, including other people, clearly and objectively, unbiased by prejudgments or preconceptions.

Table 9.2 Characteristics of self-actualizing people

Clear perception of reality
Acceptance of self, others, and nature
Spontaneity, simplicity, and naturalness
Dedication to a cause
Independence and need for privacy
Freshness of appreciation
Peak experiences
Social interest
Deep interpersonal relationships
Creativeness and originality
Resistance to social pressures

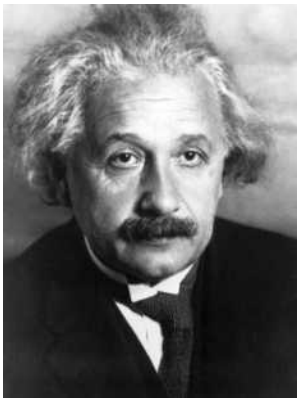
- *An acceptance of themselves, others, and nature.* Self-actualizers accept their strengths and weaknesses. They do not try to distort or falsify their self-image, and they do not feel guilty about their failings. They also accept the weaknesses of other people and of society in general.
- *A spontaneity, simplicity, and naturalness.* The behavior of self-actualizers is open, direct, and natural. They rarely hide their feelings or emotions or play a role to satisfy society, although they may do so to avoid hurting other people. Self-actualizers are individualistic in their ideas and ideals but not necessarily unconventional in their behavior. They feel secure enough to be themselves without being overly assertive.
- *A focus on problems outside themselves.* Self-actualizers have a sense of mission, a commitment, to which they devote their energy. This dedication to a cause or vocation is a requirement for self-actualization. Self-actualizers find pleasure and excitement in their work and efforts. Through their intense dedication, self-actualizers are able to satisfy their metaneeds. Their commitment challenges and develops their abilities and helps define their sense of self.
- *A sense of detachment and the need for privacy.* Self-actualizers can experience isolation without harmful effects and seem to need solitude more than persons who are not self-actualizing. Self-actualizers depend on themselves, not on others, for their satisfactions. This independence may make them seem aloof or unfriendly, but that is not their intent. They are simply more autonomous than most people and do not crave as much social support.
- *A freshness of appreciation.* Self-actualizers have the ability to perceive and experience the world around them with freshness, wonder, and awe. An experience may grow stale for someone who is not self-actualizing, but self-actualizers will enjoy each recurrence as though it was the first. Whether it is a sunset, a painting, a symphony, a baseball game, or a birthday gift—all of these experiences can be viewed with delight. Self-actualizers appreciate what they have and take little for granted.
- *Mystical or peak experiences.* Self-actualizers know moments of intense ecstasy, not unlike deep religious experiences, that can occur with virtually any activity. Maslow called these events **peak experiences**, during which the self is transcended and the person feels supremely powerful, confident, and decisive.
- *Social interest.* Maslow adopted Alfred Adler's concept of social interest to indicate the sympathy and empathy self-actualizing persons have for all humanity. Self-actualizers feel a kinship with and an understanding of others as well as a desire to help them.
- *Profound interpersonal relations.* Although their circle of friends is not large, self-actualizers have deep, lasting friendships. They tend to select as friends those with personal qualities similar to their own, just as we all choose as friends the people we find compatible. Self-actualizers often attract admirers or disciples. These relationships are usually one-sided; the admirer asks more of the self-actualizer than the self-actualizer is able or willing to give.
- *Creativeness.* Self-actualizing people are highly creative and exhibit inventiveness and originality in their work and other facets of their lives. They are flexible, spontaneous, and willing to make mistakes and learn from them. They are open and humble, in the way children are before society teaches them to be embarrassed or shy about possibly doing something foolish.
- *Resistance to enculturation.* Self-actualizers are autonomous, independent, and self-sufficient. They feel free to resist social and cultural pressures to think or behave in a certain way. They do not openly rebel against cultural norms or social codes, but they are governed by their own nature rather than the strictures of society.

peak experience A moment of intense ecstasy, similar to a religious or mystical experience, during which the self is transcended.

This is quite an amazing set of attributes. According to Maslow's research, self-actualizers seem almost perfect. But they do have human flaws and imperfections. On occasion they can be rude, and they experience doubts, conflicts, and tension. Nevertheless, such incidents are rare and less intense than for the person who is not self-actualizing.

Pause for Reflection

How do the characteristics of self-actualized people match up with other personality traits? To your personality?



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As part of his research on self-actualizers, Maslow studied the biographies of Albert Einstein and Harriet Tubman.

Failure to Become Self-Actualizing

If the need for self-actualization is innate and, therefore, does not have to be taught and learned, then why isn't everyone self-actualizing? Why do less than 1 percent of the population reach this state of being? One reason is that the higher the need in Maslow's proposed hierarchy, the weaker it is. As the highest need, self-actualization is the weakest of all; it can easily be inhibited in that more basic and stronger needs must be met first. For example, hostile or rejecting parents make it difficult for a person to satisfy love and esteem needs. In this case, the self-actualization need may not emerge at all. At a lower level, poor economic conditions can make it difficult to satisfy physiological and safety needs, so self-actualization assumes less importance. Self-actualization is a psychological luxury.

Among the self-actualizers Maslow studied by analyzing biographies and other written records were the noted physicist Albert Einstein and Harriet Tubman, a leader of the antislavery movement at the time of the American Civil War.

The Importance of Childhood in Self-Actualization

Inadequate education and unhealthy parenting can thwart the drive for self-actualization in adulthood, according to Maslow. For example, Maslow highlighted that the way boys are socialized, including encouraging them to inhibit qualities such as tenderness and sentimentality, can limit their ability to become self-actualized. As another example, if children are overprotected and not permitted to try new behaviors, explore new ideas, or practice new skills, then they are likely to be inhibited as adults, unable to express themselves fully in activities vital to self-actualization.

The opposite behavior, excessive parental permissiveness, can also be harmful, Maslow argued. Too much freedom in childhood can lead to anxiety and insecurity, thus undermining the safety needs. To Maslow, the ideal situation in childhood is a balance of permissiveness and regulation.

Sufficient love in childhood is a prerequisite for self-actualization, as well as for satisfaction of physiological and safety needs within the first two years of life. If children feel secure and confident in the early years, they will remain so as adults. This position is similar to Erik Erikson's emphasis on the development of trust in early childhood and to Karen Horney's ideas on the childhood need for security. Without adequate parental love, security, and esteem in childhood, it is difficult to strive for self-actualization in adulthood. Indeed, research suggests that adults who report experiencing unpredictable support from family, caretakers, and peers in childhood are lower in empathy and willingness to support others, as well as moral concern for avoiding harm and increasing help for others (Maranges et al., 2021).

The Jonah Complex

Another reason for the failure to self-actualize is what Maslow called the **Jonah complex**. This idea is based on the biblical tale of Jonah, described by Maslow as "called by God to prophesy, but [Jonah] was afraid of the task. He tried to run away from it. But no matter where Jonah ran, he could find no hiding place. Finally, he understood that he had to accept his fate" (quoted in Hoffman, 1996, p. 50).

Thus, the Jonah complex refers to our doubts about our own abilities. We may fear that taking action to

Jonah complex The fear that maximizing our potential will lead to a situation with which we will be unable to cope.

maximize our potential will lead to new situations with which we may be unable to cope. Simultaneously, we are afraid of and thrilled by the possibilities, but too often the fear takes precedence.

It Takes Courage! Self-actualization requires courage. Even when the lower needs have been satisfied, we cannot simply sit back and wait to be swept along a path to ecstasy and fulfillment. The self-actualizing process takes effort, discipline, and self-control. For many people it may seem easier and safer to accept life as it is rather than seek new challenges. Self-actualizers might constantly test themselves by abandoning secure routines and familiar behaviors and attitudes.

Assessment of and Research on Self-Actualization

Maslow's work on self-actualization did not begin as a formal program of personality assessment and research. He started his investigation simply to satisfy his own curiosity about two well-known people who impressed him, the anthropologist Ruth Benedict and the Gestalt psychologist Max Wertheimer. Maslow admired them greatly and wanted to understand what made them so outstandingly different from other people. After much careful observation, he concluded that they shared certain qualities that set them apart from the average person.

Maslow attempted to assess those qualities in other people. His first research participants were college students, but he found only 1 out of 3,000 he could describe as self-actualizing. He decided that the characteristics for the self-actualizing personality, those qualities he had identified in Benedict and Wertheimer, were not yet developed in young people. His next step was to study people who were middle-aged and older. However, even among this group Maslow found less than 1 percent were capable of meeting his criteria for self-actualization.

The self-actualizers he finally identified included several dozen whom he designated as certain or highly probable cases, partial cases, or potential cases. Some were Maslow's contemporaries. Others were historical figures such as Thomas Jefferson (politician, Founding Father, and third president of the United States), Albert Einstein (German-born theoretical physicist, developed theory of relativity), George Washington Carver (African American scientist in the early 20th century), Harriet Tubman (African American former slave who became an abolitionist before the Civil War), and Eleanor Roosevelt (prominent social activist married to Franklin Delano Roosevelt, 32nd U.S. president).

Maslow used a variety of techniques to assess their personalities. For historical figures, he worked with biographical material, analyzing written records for similarities in personal characteristics. He relied on interviews, free association, and projective tests to collect data from people in person. He found that many of these people were self-conscious when questioned, so often he was forced to study them indirectly, although he did not explain precisely how that was done.

Maslow did not use case studies or the experimental or correlational methods in his research. Critics have charged that Maslow's methods for studying self-actualizers were not rigorous or controlled. Maslow agreed; he knew his investigations failed to adhere to the requirements of scientific research. He wrote, "By ordinary standards of laboratory research, this simply was not research at all" (1971, p. 42). But he believed that because self-actualization could not be studied by accepted scientific procedures, the alternative was to wait until appropriate techniques were developed—or not to study the issue at all. Maslow was too impatient to postpone his research, too committed to the conviction that he could help humanity. He wrote that he did not have enough time to perform careful experiments. "They take too long in view of the years I have left and the extent of what I want to do" (1979, p. 694).

He referred to his program as consisting of pilot studies (i.e., smaller studies conducted to test an idea before more time and resources are invested in a systematic study with enough participants to make more generalizable claims) only. Convinced that his results were valid, he expected other researchers to eventually confirm his theory.

Pause for Reflection

What research methods would you use to test Maslow's ideas?

Other researchers took it upon themselves to more systematically test Maslow's ideas about basic, psychological, and, especially, self-actualizing needs. The Personal Orientation Inventory (POI), a self-report questionnaire consisting of 150 pairs of statements, was developed by psychologist Everett Shostrom (1964, 1974; Shostrom & Knapp, 1966) to measure self-actualization. People responding to the measure indicate which of each pair is more applicable to them (refer to Table 9.3).

The POI is scored for two major scales and 10 subscales. The major scales are *time competence*, which measures the degree to which we live in the present,

Table 9.3 Sample items from the Personal Orientation Inventory

Respondents select the item in each pair that is more descriptive of them.
I do what others expect of me.
I feel free to not do what others expect of me.
I must justify my actions in the pursuit of my own interests.
I need not justify my actions in the pursuit of my own interests.
I live by the rules and standards of society.
I do not always need to live by the rules and standards of society.
Reasons are needed to justify my feelings.
Reasons are not needed to justify my feelings.
I only feel free to express warm feelings to my friends.
I feel free to express both warm and hostile feelings to my friends.
I will continue to grow only by setting my sights on a high-level, socially approved goal.
I will continue to grow best by being myself.
People should always control their anger.
People should express honestly felt anger.

Source: From "An Inventory for the Measurement of Self-Actualization," by E. L. Shostrom (1964), *Educational and Psychological Measurement, 24*, pp. 207–218.

and *inner directedness*, which assesses how much we depend on ourselves rather than on others for judgments and values. The 10 subscales are self-actualizing value, existentiality, feeling reactivity, spontaneity, self-regard, self-acceptance, nature of man, synergy, acceptance of aggression, and capacity for intimate contact. For example, feeling reactivity includes items such as "No matter how hard I try, my feelings are often hurt"; capacity includes items such as "When a friend does me a favor, I feel that I must return it"; and nature of man includes items such as "I believe that the pursuit of self-interest is opposed to the interest of others."

Scores indicating higher self-actualization on the POI have been positively related to many metrics of well-being and adaptive personality traits (e.g., Burwick & Knapp, 1991; Shostrom & Knapp, 1966): more meaning in life, psychosocial maturity, extraversion, emotional stability (low neuroticism), internal locus of control, creativity, self-confidence, sexual satisfaction, academic success, and psychological well-being as well as less death anxiety, racist attitudes, alcoholism, neuroticism, and hypochondriasis. Some research suggests that it may be easier to self-actualize when people view you positively, such as when you are physically attractive (Ivtzan & Moon, 2008). More recent work has linked self-actualization to higher levels of extraversion and conscientiousness in Indian men (Sandhu, 2020). Other work indicates that people's level of self-actualization is not related to their parents' achievements but rather to their own locus of control (Rodrigues & Deuskar, 2018). In a study of over 900 Ukrainian-speaking people (mainly from Ukraine), people who experienced high levels of professional self-fulfillment were also high in self-actualization (Kokun, 2022).

A shorter measure of self-actualization, the Characteristics of Self-Actualization Scale (CSAS) includes 30 items, captures the 10 characteristics of self-actualizing people as proposed by Maslow, and positively predicted creativity, greater life satisfaction, self-acceptance, positive relations, environmental mastery, personal growth, autonomy, purpose in life, and self-transcendent experiences (Kaufman, 2018). Similarly, research with adults in China yielded a measure of Maslow's needs and motivations, and self-actualizing was associated with higher levels of family support, traditional values, Chinese cultural values, and life satisfaction, and with lower levels of the anxiety/worry facet of neuroticism (Taormina & Gao, 2013; Taormina et al., 2022). Other work emphasizes how important emotional intelligence is for self-actualization. For example, a study with Nigerian young people, researchers found that the emotional intelligence associated with self-actualization facilitates emotional and personality stability (Ugoani, 2015).

Peak Experiences Research on Americans between the ages of 40 and 65 found that the three most frequently reported peak experiences involved joyful experiences with other people, a sense of achievement, and personal growth (Hoffman et al., 2012).

Cross-cultural comparisons found that mainland Chinese reported more experiences involving serenity, whereas Chinese residents of Hong Kong reported more peak experiences involving interpersonal joy and external achievement. People in Brazil and Portugal reported that their most frequent peak experiences involved achieving some developmental landmark, such as finishing college, getting married, or finding their first job (Ho et al., 2012, 2013).

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Maslow's cognitive needs to know and to understand have been operationalized as curiosity, which helps us learn and meet our other needs.

Cognitive Needs

Maslow later proposed a second set of innate needs, the **cognitive needs**—to know and to understand—which exist outside the hierarchy we have described. The need to know is stronger than the need to understand and must therefore be at least partially satisfied before the need to understand can emerge.

Evidence for the Cognitive Needs

Several points of evidence support the existence of cognitive needs, according to Maslow (1970b):

- Laboratory studies demonstrate that animals explore and manipulate their environment for no apparent reason other than curiosity, that is, a desire to know and to understand.
- Historical evidence reveals that people often have sought knowledge at the risk of their lives, thus placing the needs to know and to understand above the safety needs.
- Studies suggest that emotionally healthy adults are attracted to mysterious and unexplained events and are motivated to improve their knowledge about them.
- Emotionally healthy adults in Maslow's own clinical practice complained of boredom and a lack of zest and excitement in their lives. He described them as "intelligent people leading stupid lives in stupid jobs" and found that they improved when they took steps to fulfill the needs to know and to understand by becoming involved in more challenging activities.

The needs to know and to understand appear in late infancy and early childhood and are expressed by children as a natural curiosity. Because the needs are innate, they do not have to be taught, but the actions of parents and teachers can serve to encourage or inhibit a child's spontaneous curiosity. Failure to satisfy the cognitive needs is harmful and hampers the full development and functioning of the personality.

The hierarchy of these two needs overlaps the original five-need hierarchy. Knowing and understanding—essentially, finding meaning in our environment—are basic to interacting with that environment in an emotionally healthy, mature way to satisfy physiological, safety, belongingness and love, esteem, and self-actualization needs. It is impossible to become self-actualizing if we fail to meet the needs to know and to understand.

Indeed, seeking to know and understand through workplace curiosity has positive outcomes in the office domain that parallel positive outcomes of self-actualizing, as evidenced in research with over 1,500 U.S. and German adults (Kashdan et al., 2020). Specifically, curiosity as joyous exploration, deprivation sensitivity, stress tolerance, and openness to people's ideas predicts positive outcomes including job satisfaction, work engagement, job crafting, healthy work relationships, and innovation in a study of Israeli adults (Birenbaum et al., 2019). Research on this topic uses the Five-Dimensional Curiosity Scale (5DC), which measures joyous exploration, deprivation sensitivity, stress tolerance, social curiosity, and thrill seeking (Kashdan et al., 2020). Using the 5DC, researchers discovered variation in curiosity as personality, with four classifications of curious people that have different interests, areas of expertise, consumer behavior, and social media use: the Fascinated, Problem Solvers, Empathizers, and Avoiders (Kashdan et al., 2018). They also differ in responses to curiosity-related stimuli, the types of questions they find interesting, and the sorts of values that motivate their behavior (Birenbaum et al., 2019).

Pause for Reflection

How can curiosity support meeting basic needs? Psychological needs? Growth needs?

Self-Determination Theory

A contemporary outgrowth of the essence of Maslow's self-actualization theory is the self-determination theory, which suggests that people have an innate tendency to express their interests, to exercise and develop their

cognitive needs Innate needs to know and to understand.

Highlights

Research on Maslow's Ideas

People whose basic (physiological and safety) needs are met tend to have . . .

- Higher psychological and physical well-being
- Academic success
- Stronger agreeable and moral tendencies

People whose psychological (belonging/love and esteem) needs are met tend to have . . .

- Higher psychological and physical well-being
- Academic success
- Stronger personal cultural identities

People whose growth (self-actualizing) needs are (increasingly) met tend to have . . .

- Higher psychological and physical well-being
- Academic success
- More extraverted, emotionally stable, conscientious, and creative personalities

capabilities and potentials, and to overcome challenges (Deci & Ryan, 2009, 2012; Ryan & Deci, 2000).

Research supporting the notion of self-determination has come from diverse groups such as football players in Australia, teenagers in India and Nigeria, and older women in the United States. Those who scored highest in self-determination were characterized by the greatest positive, productive behavior and subjective well-being (Deci, 2011; Podlog & Eklund, 2010; Sheldon et al., 2009; Stephan et al., 2010).

More recent research studying people in the United States, Belgium, China, Peru, Australia, Mexico, Venezuela, the Philippines, Malaysia, and Japan has provided further support for the role of self-determination in facilitating positive growth needs and self-actualization (Chen et al., 2014; Church et al., 2013).

Intrinsic Motivation

Self-determination is facilitated by a person's focus on *intrinsic motivation*, such as engaging in an activity solely because of the interest and challenge of the activity itself. *Extrinsic motivation*, on the other hand, involves engaging in some activity only for the sake of some external reward such as praise, a promotion or pay raise, or a higher grade.

There is a basic similarity between the notions of intrinsic motivation and self-determination, and Maslow's description of self-actualization. Both are concerned with fulfilling or realizing one's talents and abilities for the goal of inner satisfaction rather than any kind of external reward. For example, in research with South African 9th graders, students who placed particularly high importance on intrinsic goals and aspirations had the highest levels of psychological well-being (Kerchhoff et al., 2017). Similarly, a study in Japan found that undergraduate students with strong intrinsic aspirations experienced higher life satisfaction, while those with higher extrinsic aspirations experienced lower life satisfaction (Nishimura & Suzuki, 2016).

In a study of French adults, employees who scored high in intrinsic motivation engaged in more other-supporting styles of leadership and were more likely to engage in moral workplace behaviors (Brière et al., 2021).

Three Basic Needs Self-determination theory specifies three basic needs; it is through the satisfaction of these needs that a person can reach a state of well-being.

1. Competence—the need to feel that one can master difficult tasks
2. Autonomy—the freedom to base one's course of action on one's own interests, needs, and values
3. Relatedness—the need to feel a close connection with other people

Satisfaction of these needs among people of varying ages in cultures as diverse as the United States, France, Spain, and Russia was positively associated with high self-esteem, self-actualization, and psychological and physical well-being (Ferrand et al., 2014; Gomez-Baya & Lucia-Casademunt, 2018; Milyavskaya & Koestner, 2011; Ryan & Deci, 2000, Strizhitskaya & Davedyuk, 2014). In that study of French employees, those who had other-supporting styles of leadership were more likely to engage in moral workplace behaviors, and this was in part due to their being able to meet the three basic needs (Brière et al., 2021). Research on the efficacy of support interventions for young people without homes in Belgium suggests that in addition to providing housing and resources, supporting unhoused youth with social support and reducing their psychological distress can increase their experience of competence, autonomy, and relatedness (Krabbenborg et al., 2017).

Pause for Reflection

How do the three basic needs match up with Maslow's proposed needs? Given your personality, what form does meeting these needs take for you?

Questions About Human Nature

Maslow's theory of personality is humanistic and optimistic. He focused on psychological well-being rather than distress, growth rather than stagnation, virtues and potentials rather than weaknesses and limitations. He had a strong sense of confidence in our ability to shape our lives and our society.

We have the free will to choose how best to satisfy our needs and to actualize our potential. We can either create an actualizing self or refrain from pursuing that supreme state of achievement. Thus, so long as our basic and psychological needs are met, we are ultimately responsible for the level of personality development we reach or fail to reach.

Although the needs in Maslow's hierarchies are innate, the behaviors by which we satisfy them are learned. Therefore, personality is determined by the interaction of heredity and environment, of personal and situational variables.

Although not explicit in his writings, Maslow seemed to favor the uniqueness of personality. Our basic motivations and needs are universal, but the ways in which the needs are satisfied will vary from one person to another because these ways of behaving are learned. What likely varies among people are the extent to which they are motivated by and reach metaneeds in the process of self-actualization. But even among self-actualizers, their personalities, interests, and values are not identical.

Maslow recognized the importance of early childhood experiences in fostering or inhibiting positive personality development, but he did not believe that we are completely constrained by these experiences. We have more potential than we may realize to manage our lives and our society and would be happier and more productive if we would learn to do so.

Self-actualization as the ultimate goal reflects Maslow's belief that, given the proper conditions, we are capable of reaching the highest level of human flourishing and well-being.

Maslow argued that human nature is basically good, decent, and kind, but he did not deny the existence of evil. He believed some people were evil beyond reclamation and wrote in his journal that "nothing will work ultimately [with them] but shooting" (1979, p. 631).

He suggested that wickedness was not an inherited trait but rather the result of extreme environments. Maslow's compassion for humanity is clear in his writings, and his optimism is expressed in the belief that each of us is capable of fulfilling our vast human potential, granted our basic needs are met.

Reflections on Maslow's Theory

Abraham Maslow's contributions to personality psychology and psychology more generally cannot be understated. His work is foundational to positive and humanistic psychology. The Association for Humanistic Psychology and the American Psychological Association: Society for Humanistic Psychology continue to build on that work.

Criticisms of Maslow's theory center on his research methods and lack of experimentally generated supporting data. The sample of self-actualizing people from which the data were derived, fewer than half of whom were interviewed in person, is too small for generalization to the population at large. Critics also charge that the ways in which Maslow amassed information about his original self-actualizing subjects are inconsistent and vague. He did not describe how he interpreted test results or analyzed biographical materials, nor did he indicate precisely what led him to identify those particular people as self-actualizing. His list of characteristics of self-actualizers derives solely from his clinical interpretations of the data and may easily have been

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Ground Picture/Shutterstock.com

Building on Maslow's theory, Richard Ryan and Edward Deci propose that humans need competence, autonomy, and relatedness to thrive.

influenced by his personal philosophy, moral values, and the limited diversity of the people he considered. Thus, the descriptions may actually reflect Maslow's own ideas about what constitute the ideal personality. Maslow's defense against these charges was that although his theory was not widely supported by laboratory research, it was successful in social, clinical, and personal terms. He wrote, "It has fitted very well with the personal experience of most people, and has often given them a structured theory that has helped them to make better sense of their inner lives" (1970b, p. xii).

However, as we have seen with other theorists, weakness in theoretical clarity and scientific methodology is not unique to Maslow. In addition, many other researchers have provided empirical support for his theories through systematic research.

Another important criticism of Maslow's theory is his inattention to the implications of contextual factors that facilitate self-actualization for parity in society. As discussed previously, gratification of higher needs like esteem and the ultimate self-actualization requires relative privilege: external social, economic, and political freedom. That people whose circumstances are out of their control (e.g., losing a job to large company layoffs, having to care for a sick relative such that working becomes impossible, not being paid a living wage) are barred from reaching what Maslow considered the ultimate human goal because the basic needs must be met first can be viewed as an injustice. To his credit, though, Maslow did have this very insight: Basic physiological and safety needs must be met before real flourishing and well-being can be established.

Partly because of Maslow's optimism and compassion, his theory, and the humanistic approach to psychology in general, became extremely popular in the 1960s and 1970s. The trappings of a formal school of thought were then set in place. Journals and organizations were founded, and a division of humanistic psychology was formed within the American Psychological Association. The concerns of humanistic psychologists experienced a rebirth in the positive psychology movement (Chapter 14). Leaders of that movement credit humanistic psychology as a forerunner of positive psychology.

Thus, Maslow's legacy still flourishes today, influencing personality, social developmental and organizational psychology (Kenrick et al., 2010). Few theories have had such a broad impact beyond the discipline. Teachers and counselors, business and government leaders, health care professionals, and many ordinary people trying to cope with the hassles of everyday life have found Maslow's views compatible with their needs and useful in solving their problems.

Pause for Reflection

Are there other criticisms of Maslow's theories that weren't covered here? Other strengths?

DEI Spotlight

Maslow's Theory and Diversity, Equity, and Inclusion

Maslow's theory focuses on people's basic, psychological, and growth needs and motivations and the positive aspects of personality. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individual, Family, and Society. Here we focus on the contributions and research of Dr. Fernando A. Ortiz, PhD, a Latino psychologist and professor who not only serves as a leader in his university's counseling center but also dives deep in researching the personality and experiences of Latina/os from a humanistic perspective. For example, Dr. Ortiz has studied peak experiences in Mexican youth (Hoffman & Ortiz, 2010), how sex education shapes motherhood decision making in Colombia (Albornoz-Arias et al., 2019), and self-actualization in Latino/Hispanic culture (Ortiz, 2020). It is clear from his impressive track record of counseling, teaching, and research that the cognitive needs—to know and to understand—have guided him in his career.

His work on self-actualization in Latino/Hispanic culture highlights how Maslow's theories can help us understand diverse individuals, families, and societal groups.

DEI Spotlight, continued

Maslow's Theory and Diversity, Equity, and Inclusion

He writes, "*Familismo, personalismo*, and *simpatia* are some of the most important cultural values and behaviors that allow them to fulfill their vocation as highly relational people" (Ortiz, 2020, p. 418, abstract). Ortiz argues that Latina/os' psychological experiences have their foundation in a collectivist culture that emphasized the importance of belonginess and love via relationships. As discussed previously, strong cultural identities are associated with higher levels of self-actualizing. Latina/o cultural identity, purpose, and meaning in life entail investment in the collective. Ortiz points out that these collective contexts, values, and behaviors facilitate self-actualization, particularly in light of the family's being the context where basic and psychological needs are being met. He explains,

> One of the most important values for normal development and adjustment on the Latino individual is *familismo* (Zinn, 1982). It has been consistently demonstrated that Latinos/as endorse a significantly higher level of *familismo* than European Americans and other cultural groups (Baca-Zinn, 1994; Marin, 1993). It comprises close bonds with one's family, cohesiveness, interdependence, fulfilling familiar obligations, and holding strong perceptions of familial support (Sabogal, Marín, Otero-Sabogal, VanOss Marín, & Perez-Stable, 1987). (Ortiz, 2017, p. 421)

As we have discussed, one important feature of the self-actualized life is "peak experiences" that entail feelings of extreme happiness and fulfillment and which Ortiz has linked to these Latina/o values. He summarizes his work on this:

> Hoffman and Ortiz (2008, 2010, 2010b) have examined the structure and expression of these peak experiences in the Latina/o culture. Mexican youth, for example, reported their peak experiences as containing interpersonal joy related to feelings of interconnectedness found with family, friends, and acquaintances . . . specifically under the values of *familismo* and *personalismo* (Ortiz, 2020, p. 428).

Not only are the family and larger social group key to peak experiences and self-actualization, but these values also shape the value of approaching others. Therefore, they shape the sort of personality that is viewed as most positive, healthy, and worth growing toward—*simpatia*.

> *Simpatia*, roughly translated as friendliness, is a consequential concept for Latinos/as, and this is defined as a general tendency toward avoiding interpersonal conflict, emphasizing positive behaviors in agreeable situations, and de-emphasizing negative behaviors in conflictive circumstances (Triandis, Mann, Lisansky, & Betancourt, 1984). The emphasis is on harmony, social acceptance, and social support as cultural ideals. Latinos/as value expressive displays of personal charm, graciousness, and hospitality (Albert, 1996; Gabrieldis, Stephan, Ybarra, Pearson, & Villareal, 1997; Roll, Millen, & Martinez, 1980). Behaviorally, this value is demonstrated by proactively creating a highly personable atmosphere as an end in itself in occupational, educational, clinical, and other professional settings (Triandis et al., 1984). . . . Self-actualization motivated by *simpatia* results when Latina/os enjoy socially positive behaviors that enhances the quality and positive affect of interactional involvement with others. One cannot separate self-actualization from sociability. (p. 424)

Dr. Ortiz closes by sharing about a case study highlighting how these insights can inform the work of counselors, therapists, and social workers working with Latina/o populations. The case "is representative of the psychological and emotional struggles that negatively affect the lives of Latina/os. It is a complex clinical presentation that includes both personal factors and contextual realities . . ." (Ortiz, 2020, p. 429). This case study focuses on José, a young 20-something college student in New York who immigrated from Mexico to the United States when he was 16 years old. José became so busy with work and school that he had less time to connect with family via online video or other means, and he felt distressed that he could not send as much

DEI Spotlight, continued

Maslow's Theory and Diversity, Equity, and Inclusion

money to his family because he was paying for school. Of course, Latina/os experience a vast array of situations and challenges, and José's is just one. But it underscores the importance of the cultural connectedness and the implications for self-actualization:

1. Be aware and sensitive to José's sense of solidarity, loyalty, and reciprocity with his family in Mexico. Establish therapeutic rapport with him and discuss how this emotional support system provides a sense of meaning and purpose for him. Be comfortable highlighting and validating this attachment to *familismo*.
2. Incorporate into your clinical conceptualization references to *simpatia* and the importance of harmony for Jóse as he attempts to balance tasks and achievement with family responsibilities . . . .
3. Prompt José to journal any peak experiences he has had in the past. These may be moments when he felt interpersonal joy, a sense of achievement in his life, and when he felt he was crossing a significant threshold in his personal history and development, particularly when these developmental landmarks were celebrated in the context of family and friends. (Ortiz, 2020, p. 430)

Thus, Maslow's humanistic theory has provided a framework in which a deeper understanding of Latino individuals, families, and culture can be established.

Chapter Summary

Maslow argued that each person is born with instinctoid needs that lead to growth, development, and actualization. The hierarchy of needs includes basic needs (physiological needs for food, water, sleep, and sex and the need for safety), psychological needs for belongingness and love as well as esteem, and the ultimate need for self-actualization.

The lower needs must be satisfied before the higher needs emerge. The lower the need, the greater its strength. Lower needs are called deficit needs because failure to satisfy them produces a deficit in the body. Higher needs (growth or being needs) are less necessary for survival but enhance physical and psychological well-being.

Safety needs (for security, stability, order, and freedom from fear and anxiety) are most important in infants and can manifest as neuroticism if oversensitized in adults. Belongingness and love needs can be satisfied through association with a group or affectionate relations with one person or a group of people. Esteem needs include self-esteem and esteem from others. Self-actualization involves the realization of one's potential, the most positive version of one's personality, abilities, and values, and requires a realistic knowledge of one's strengths and weaknesses. The needs to know and to understand form a hierarchy of cognitive needs that emerges in late infancy and early childhood and manifests across the life span as curiosity.

Motivation in self-actualizers (metamotivation) serves not to make up for deficits or reduce tension, but to enrich life and increase tension. Metaneeds are states of growth toward which self-actualizers move. Frustration of metaneeds produces metapathology, a lack of psychological well-being.

Self-actualizers may constitute less than 1 percent of the population. They share the following characteristics: efficient perception of reality, acceptance of themselves and others, spontaneity and simplicity, focus on problems rather than self, commitment to helping others or a cause, privacy and independence, freshness of appreciation, peak experiences, social interest, intense interpersonal relationships, creativeness, democratic character structure, and resistance to enculturation. Not everyone becomes self-actualizing because self-actualization is the weakest

need in the hierarchy and easily interfered with. Too much freedom or lack of security in childhood inhibits self-actualization, Maslow argued. Also, some people fear realizing their highest potential, what Maslow termed the Jonah complex.

Maslow's characterization of human nature is optimistic, emphasizing free will, conscious choice, uniqueness, the ability to overcome childhood experiences, and innate goodness. Personality is influenced both by heredity and by environment. Our ultimate goal is self-actualization.

Maslow used interviews, free association, projective techniques, and biographical material to assess personality. There is ample empirical evidence to support Maslow's theories that comes primarily from the systematic research of other psychologists. Research supports the idea that there are five clusters of needs, that the motivation to meet lower needs will dominate the personality until that need is met and therefore will preclude a higher need from being met, and that meeting the needs is associated with positive outcomes for mental and physical health, career and academic success, positive personality development, and growth as an individual who contributes to society. A contemporary outgrowth of Maslow's work is self-determination theory, which posits that well-being and success can be attained when the individual is internally (versus externally) motivated and has met their three needs: competence, autonomy, and relatedness.

Maslow has been criticized for using too small a sample as the basis for his theory and for not making explicit his criteria for selecting self-actualizing exemplars. His theory has had a broad impact on not only psychology but also education, counseling, health care, business, and government. It has proven to be a stimulus for the positive psychology movement, which focuses on well-being.

Review Questions

1. Describe the hierarchy of needs Maslow proposed.
2. What are the differences among the basic, psychological, and growth needs?
3. What outcomes and personality traits are the basic (physiological and safety) needs associated with?
4. What outcomes and personality traits are the psychological (belongness/love and esteem) needs associated with?
5. Summarize in four sentences research findings about self-esteem.
6. What conditions are necessary in order to satisfy the self-actualization need?
7. What are the characteristics of people who have self-actualized?
8. With what outcomes and personality traits is the self-actualizing need associated?
9. Define metaneeds and list each of them.
10. What sort of childhood environment does Maslow suggest supports psychological and growth needs?
11. What are the cognitive needs?
12. Summarize in four sentences research findings about curiosity.
13. Compare and contrast Maslow's view of human nature with that of another theorist we have discussed so far in this textbook.
14. Describe the nature of self-determination theory. Identify the three needs proposed by the theory.
15. Summarize in four sentences research findings about the three needs and intrinsic motivation according to self-determination theory.
16. Describe how Maslow's theory helps in understanding diverse cultural factors.

Suggested Readings

- Frick, W. B. (2000). Remembering Maslow: Reflections on a 1968 interview. *Journal of Humanistic Psychology, 40*, 128–147. Excerpts from an interview with Maslow and commentary on his personal difficulties with his work, his ideas about self-actualization, and the future of third-force psychology.
- Hall, M. H. (1968, July). A conversation with Abraham H. Maslow. *Psychology Today,* pp. 35–37, 54–57. An interview with Maslow about the scope of his work.
- Hoffman, E. (1988). *The right to be human: A biography of Abraham Maslow*. Jeremy Tarcher. A biography based on published and unpublished material describing Maslow's difficult childhood and tracing his career from his early work with primates to his involvement with the human potential movement.
- Hoffman, E. (2017). The social world of self-actualizing people: Reflections by Maslow's biographer. *Journal*

of Humanistic Psychology, *60*(6), 908–933. https://doi.org/10.1177/0022167817739714

- Maslow, A. H. (1968). *Toward a psychology of being* (2nd ed.). Van Nostrand Reinhold. States Maslow's view that humans can be loving, noble, and creative and are capable of pursuing the highest values and aspirations. Also acknowledges the importance of Freud's concept of the unconscious.
- Maslow, A. H. (1970). *Motivation and personality* (2nd ed.). Harper & Row. Presents Maslow's theory of motivation and personality, emphasizing psychological health and self-actualization. A third edition (Harper & Row, 1987), revised and edited by Robert Frager and James Fadiman, includes material on Maslow's life, the historical significance of his work, and applications of self-actualization to management, medicine, and education.
- Maslow, A. H. (1996). *The unpublished papers of Abraham Maslow.* Edited by E. Hoffman. Sage. Includes previously unpublished essays, articles, and papers with annotations and a biographical sketch.
- Milton, J. (2002). *The road to malpsychia: Humanistic psychology and our discontents*. Encounter Books. A biography of Maslow in the context of a cultural history of the rise and fall of the humanistic psychology movement.

Chapter 10

The organism has one basic tendency and striving—to actualize, maintain, and enhance the experiencing organism. —Carl Rogers

Carl Rogers: Self-Actualization Theory

Learning Objectives

10.1 Compare and contrast Rogers' theory with that of psychoanalysts and developmental stage theorists, providing three examples of similarities and differences.

10.2 Describe the self-actualizing tendency.

10.3 Outline the Organismic Valuing Process.

10.4 Define positive regard.

10.5 Identify the effects of positive regard from others and of positive regard from the self.

10.6 List the positive effects of congruence and negative effects of incongruence.

10.7 Analyze whether research evidence is strong or weak for each characteristic of fully functional (self-actualizing) persons.

10.8 Describe the person-centered approach to therapy in four sentences.

10.9 Compare and contrast the Q-sort technique with measures of personal experience.

10.10 Summarize Rogers' theory of personality in five sentences.

Carl Rogers originated a popular approach to psychotherapy known initially as nondirective or client-centered therapy, which later came to be called person-centered therapy. This form of psychotherapy has generated an enormous amount of research and is widely used today in counseling contexts (see, for example, Cain, 2014; Kirschenbaum, 2009).

Rogers' personality theory, like Maslow's, is rooted in humanistic psychology, which Rogers made the framework for the patient–therapist relationship. Rogers did not develop his theory from experimental research conducted in laboratories but rather from his experiences working with patients, or clients as he preferred to call them. According to Rogers, the therapeutic context tells us much about his view of human nature.

Consider the phrase *person-centered therapy*. It tells us that the ability to change and reach a healthy, stable personality is centered within the person. In other words, it is the person and not the therapist who directs such change. The therapist's role is to assist or facilitate the change (see Bozarth, 2012).

Rogers believed that we are rational beings ruled by a conscious perception of ourselves and our experiential world. He gave very little importance to unconscious forces or other Freudian explanations. Although he considered environmental factors important in the psychology of children, he also rejected the notion that events from our past exert a primary controlling influence on our present behavior as adults. Rogers recognized that childhood experiences continue to affect the way we perceive our environment and ourselves but insisted that current feelings and emotions have a greater impact on personality.

Because of this emphasis on the conscious and the present, Rogers believed that personality could only be understood from each person's own perspective, based on their subjective experiences. Rogers dealt with reality as consciously perceived by each of us, and he noted that this perception did not always coincide with objective reality.

Rogers proposed one single, innate, overriding motivation: the inborn tendency to actualize, to develop our abilities and potentials to the fullest. This ultimate goal is to actualize the self, to become what Rogers called a *fully functioning person*. His approach to therapy and theory, and the optimistic and humanistic picture he painted, received enthusiastic acceptance in psychology, education, and family-life research.

The Life of Rogers (1902–1987)

Relying on His Own Experience

The fourth child in a family of six, Rogers was born in 1902 in Oak Park, Illinois, a suburb of Chicago. His parents held extremely strict religious views and emphasized moral behavior, the virtue of hard work, and the importance of suppressing all displays of emotion. Rogers later wrote that their fundamentalist Christian teachings gripped him like a vise throughout his childhood and adolescence. His parents' beliefs forced him to live by their view of the world rather than his own. It was understood by all the children that they must never "dance, play cards, attend movies, smoke, drink, or show any sexual interest" (Rogers, 1967, p. 344). He would soon make their beliefs a target for revolt.

An Older Brother and a Lonely Childhood

Rogers had little social life outside his family, and he came to believe that his parents favored an older brother. As a result, there was considerable competitiveness between them. Rogers described himself as shy, solitary, dreamy, and often lost in fantasy. A biographer noted that Rogers grew up with "bitter memories of being the inevitable butt of his brother's jokes, even as he was starved of joy by his mother" (Milton, 2002, p. 128).

In an attempt to escape his loneliness, he read incessantly, any book he could find, even dictionaries and encyclopedias. His solitude led him to depend on his own resources and experiences, his personal view of the world. That characteristic remained with him throughout his life and became the foundation of his personality theory. In later years, he realized how strongly his loneliness had influenced his theory as well as his own personality.

> As I look back, I realize that my interest in interviewing and in therapy certainly grew out of my early loneliness. Here was a socially approved way of getting really close to individuals and thus filling some of the hunger I had undoubtedly felt. (Rogers, 1980, p. 34)

Moths and Bizarre Fantasies When Rogers was 12, the family moved to a farm 30 miles from Chicago where rural life awakened his interest in science. First, he became fascinated by a species

of moth he discovered in the woods. He observed, captured, and bred them over many months. Second, he became interested in farming, which his father pursued with modern, scientific methods.

Rogers read about agricultural experiments and came to appreciate the value of the scientific approach with its use of control groups, isolation of a variable for study, and statistical analysis of data. It was an unusual undertaking for an adolescent. At the same time, he may have experienced psychotic symptomatology, the nature of which he never fully explained. He wrote, "My fantasies during this period were definitely bizarre, and probably would be classified as schizoid by a diagnostician, but fortunately, I never came in contact with a psychologist" (1980, p. 30).

Finding Freedom in China Rogers decided to study agriculture at the University of Wisconsin, the college his parents, two older brothers, and one sister had attended. But following his sophomore year, he gave up the scientific study of agriculture to prepare for Christian ministry. In his junior year at Wisconsin, Rogers was selected to attend an international Christian student conference in Beijing, China. During his six months of travel, he wrote to his parents that his philosophy of life was changing. His religious views had swung from fundamentalist to liberal.

Freeing himself of his parents' ways grieved them but brought him emotional and intellectual independence. He realized, he later wrote, that he could "think my own thoughts, come to my own conclusions, and take the stands I believed in" (1967, p. 351). This liberation, and the confidence and direction it gave him, reinforced his opinion that all human beings must learn to rely on their own experiences, ideas, and beliefs. But reaching that conclusion was a difficult process. After being hospitalized for five weeks for ulcers, which may have been induced by stress, he remained at the family farm for a year to recuperate before returning to college.

A Unique Approach to Counseling

In 1924, Rogers graduated from the University of Wisconsin, married a childhood friend, Helen Elliot, and enrolled at Union Theological Seminary in New York to become a clergyman. After two years, however, he transferred to Teachers College of Columbia University across the street to study clinical and educational psychology. He received his PhD in 1931 and joined the staff of the Child Study Department of the Society for the Prevention of Cruelty to Children in Rochester, New York. His job involved diagnosing and treating children whose families had low socioeconomic resources and were facing mental health challenges or engaging in antisocial behaviors.

In 1940, he moved from a clinical to an academic setting with an appointment as professor of psychology at Ohio State University. There, Rogers began to formulate his person-centered views on counseling. He also worked to bring clinical psychology into the mainstream of contemporary psychological thought. He spent the years 1945 to 1957 at the University of Chicago, teaching and developing the Counseling Center.

A Breakdown and Therapy Finding himself unable to help a client with mental health challenges, he became so upset that he had what was then called a nervous breakdown. His self-confidence was shattered. He wrote that he felt "deeply certain of my complete inadequacy as a therapist, my worthlessness as a person, and my lack of any future in the field of psychology" (1967, p. 367).

He and his wife left Chicago and set out for their cabin in upstate New York, where Rogers remained secluded for the next six months. When he felt well enough to return to the university, he also began undergoing therapy for himself, becoming aware of just how deep his feelings of insecurity were. He said he believed that "no one could ever love *me,* even though they might like what I did" (quoted in Milton, 2002, p. 131).

Finally Finding Himself Rogers' therapy was apparently successful, and he emerged with a newfound ability to give and receive love and to form deep emotional relationships with other people, including his clients.

He taught at the University of Wisconsin from 1957 to 1963. During those years, he published many articles and books that brought his personality theory and person-centered therapy to a wide audience. His clinical experience while in academia was mostly with college students in the counseling centers. Thus, the kind of person he treated during that time—young, intelligent, highly verbal, and, in general, highly functioning with challenges to psychological adjustment but not facing extreme mental health issues—was different from the populations treated by the Freudians or by clinical psychologists in private practice.

In 1964, Rogers became a resident fellow at the Western Behavioral Sciences Institute in California, working to apply his person-centered philosophy to international problems such as the reduction of tension

between Protestants and Catholics in Northern Ireland, and between Jews and Arabs in the Middle East. He served as president of the American Psychological Association in 1946 and received that organization's Distinguished Scientific Contribution Award and Distinguished Professional Contribution Award.

The Self and the Tendency Toward Actualization

During his trip to China, Rogers came to recognize the importance of an autonomous self as a factor in his own development. His early research reinforced the importance of the self in the formation of the personality. In the 1930s, he developed a method for determining whether a child's behavior was healthy and constructive or unhealthy and destructive. He investigated the child's background and had the child rated on factors he believed would influence personality and behavior. These factors included the family environment, health, intellectual development, economic circumstances, cultural influences, social interactions, and level of education. All of these factors are external, that is, part of the child's environment.

Rogers also investigated a potential internal influence, the child's self-understanding or self-insight. Rogers described self-insight as an acceptance of self and reality, and a sense of responsibility for the self.

Self-Insight

Ten years later, William Kell, one of Rogers' students, attempted to predict the behavior of children who engage in antisocial behavior. He and Rogers predicted that the factors of family environment and social interactions (external factors) would correlate most strongly with antisocial behavior, but he was wrong. The factor that most accurately predicted later behavior was self-insight.

Surprised to learn that family environment did not relate highly to later delinquent behavior, Rogers wrote, "I was simply not prepared to accept this finding, and the study was put on the shelf" (1987, p. 119). Two years later, Helen McNeil, who also worked with Rogers, replicated the study using a different group of participants and got results similar to those of Kell. A person's level of self-insight was the single most important predictor of behavior.

This time, faced with such an accumulation of data, Rogers accepted the findings and, on reflection, came to appreciate their significance. If one's attitude toward the self was more important in predicting behavior than the external factors widely thought to be so influential in childhood, then counselors and social workers were emphasizing the wrong things in trying to treat children and adolescents who engage in antisocial behavior.

Counselors traditionally focused on external factors such as a poor family environment and altered the circumstances by removing children from a threatening home situation and placing them in foster care. Such approaches should be complemented with the counselor's supporting the children's self-insight. That realization was important to Rogers personally:

> This experience helped me decide to focus my career on the development of a psychotherapy that would bring about greater awareness of self-understanding, self-direction, and personal responsibility, rather than focusing on changes in the social environment. It led me to place greater emphasis on the study of the self and how it changes. (Rogers, 1987, p. 119)

Thus, the idea of the self became the core of Rogers' theory of personality, as it had become the core of his own life. Much of the research that builds on Rogers' work focuses on authenticity, a state in which people know themselves, live out their personality, and accept responsibility for autonomously building one's self, values, and meaning. For example, across four studies with Americans, researchers confirmed that authenticity is associated with a positive, even self-enhancing understanding of the self (Guenther et al., 2023). Additionally, the importance of self-connection is highlighted by scholars who argue that self-connection entails three components—awareness of the self, acceptance of the self, and alignment of behavior with that awareness—and is important for mental health and well-being (Klussman et al., 2022).

Pause for Reflection

Why do you think self-insight is so important for personality change and well-being?

Actualizing Tendency

Rogers believed people are motivated by an innate tendency to actualize, maintain, and enhance the self. This drive toward self-actualization is part of a larger **actualization tendency**, which encompasses all of our physiological and psychological needs. By attending

actualization tendency The basic human motivation to actualize, maintain, and enhance the self.

to basic requirements, such as the needs for food, water, and safety, the actualization tendency serves to maintain the organism, providing for sustenance and survival.

Rogers believed that the actualization tendency begins in the womb, facilitating human growth by providing for the differentiation of the physical organs and the development of physiological functioning. It is responsible for maturation—the genetically determined development of the body's parts and processes—ranging from the growth of the fetus to the appearance of the secondary sex characteristics at puberty. These changes, programmed into our genetic makeup, are all brought to fruition by the actualization tendency.

Even though such changes are genetically determined, progress toward full human development is neither automatic nor effortless. To Rogers, the process involves struggle and pain. For example, when children take their first steps, they may fall and hurt themselves. Although it would be less painful to remain in the crawling stage, most children persist. They may fall again and cry, but they persevere despite the pain because the tendency to actualize is stronger than the urge to regress, simply because the growth process is difficult.

This idea fits with modern research suggesting that people act in ways to meet their needs and accomplish their goals, with some people persevering more than others. The more people are motivated to pursue their goals and the better they self-regulate in order to meet those goals—reflecting an actualizing tendency or growth motivation—the better their well-being, that is, the higher their life satisfaction, psychological well-being, and harmony in life (Vainio & Daukantaitė, 2016; Tangney et al., 2004). Such an actualizing tendency is also evident in real post-traumatic growth, whereby an individual's coping with a traumatic stressor gives rise to personal growth and psychological benefit (Tedeschi & Calhoun, 2004). The five dimensions of posttraumatic growth are personal strength, new possibilities, relating to others, appreciation of life, and spiritual change. Importantly, the existence of positive change after trauma does not mean that trauma is desirable or good or necessary for actualization (indeed, it is associated with many maladaptive outcomes; Joseph et al., 2012). Instead, posttraumatic growth highlights the tendency for people to grow, including through painful times. But as we will read, self-actualizing is difficult, and some individuals may perceive personal growth after a stressor as a sort of psychological defense mechanism and as a way to cope, while others may experience real constructive growth manifest in their personalities and how they live their lives (e.g., Boerner et al., 2017).

Wavebreak Media Premium / Alamy Stock Photo

Rogers suggested that all people seek to grow and self-actualize, including in the context of challenge.

Organismic Valuing Process

The governing process throughout the life span, in Rogers' view, is the **organismic valuing process** (OVP). Through this process, we evaluate all life experiences by how well they serve the actualization tendency. Experiences that we perceive as promoting actualization are evaluated as good and desirable; we assign them a positive value. Experiences perceived as hindering actualization are undesirable and thus earn a negative value. These perceptions influence behavior because we prefer to avoid undesirable experiences and to repeat desirable experiences.

Many years after Rogers proffered this theoretical claim, researchers reviewing evidence for OVP in positive psychology write, "By revisiting OVP theory, it might be possible to integrate our knowledge on different aspects of well-being to get a holistic picture of individual growth across life" (Maurer & Daukantaitė, 2020, p. 2). One mechanism by which we as organisms are pushed toward what is good for us and pulled away from what is bad for us in terms of growth is intrinsic motivation, which we discussed in the previous chapter. We are more likely to enjoy and continue engaging in behaviors and goal pursuits that are personally important and motivated, more so than if those behaviors and goals are just encouraged or demanded from external forces (Ryan & Deci, 2000). People with higher levels of intrinsic motivation in the workplace

organismic valuing process The process by which we judge experiences in terms of their value for fostering or hindering our actualization and growth.

are more likely to be satisfied with their work, share knowledge with others, perceive their work performance as higher, feel more committed, and be less likely to experience burnout, emotional exhaustion, and stress (for review, refer to Deci et al., 2017).

Pause for Reflection

In your life, do you only experience what is good for growth as pleasant and what is bad for growth as unpleasant?

The Experiential World

In developing his theory, Rogers weighed the impact of the experiential world in which we operate daily. This provides a frame of reference or context that influences our growth. We are exposed to countless sources of stimulation every day. Some are trivial and some important, some threatening and others rewarding. He wanted to know how we perceive and react to this multifaceted world of experiences to which we are constantly exposed.

Rogers answered the question by saying that our responses to the environment depend on our perception of it, which may not always coincide with reality. We may react to an experience far differently from the way our best friend does. You may judge the behavior of your roommate in a dramatically different way than does someone decades older. Our perceptions depend on our personalities and also change with time, circumstances, and cultural norms.

As the actualization tendency in infancy leads us to grow and develop, our experiential world broadens.

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Rogers argued that we seek out experiences that are positive because they are good for us. People who enjoy their occupation have better well-being at work.

Infants are exposed to more and more sources of stimulation and respond to them as they are subjectively perceived. Our experiences become the only basis for our judgments and behaviors. Rogers wrote, "Experience is, for me, the highest authority. The touchstone of validity is my own experience" (1961, p. 23). Higher levels of development sharpen our experiential world and ultimately lead to the development of the self.

The Development of the Self in Childhood

As infants gradually develop a more complex experiential field from widening social encounters, one part of their experience becomes differentiated from the rest. This separate part, defined by the words *I*, *me*, and *myself*, is the self or self-concept. The formation of the self-concept involves distinguishing what is directly and immediately a part of the self from the people, objects, and events that are external to the self. The self-concept is also our image of what we are, what we should be, and what we would like to be. Ideally, the self is a consistent pattern, an organized whole. All aspects of the self strive for consistency.

Self-concept can encompass perceptions of our personality traits, abilities, preferences, and relationships across diverse domains of life. For example, children develop academic self-concepts—perceptions of their own competence in academic subjects. In a longitudinal study of nearly 3,370 German students in fifth grade, researchers found that a complex confluence of factors, including grades in math classes, grades in language class, type of school program attended in the past, and standardized math exam scores, contribute to students' self-concept over time (Marsh et al., 2018). In modern times, children's self-concepts may also be linked to characters they play in games, as evidenced by a study examining brain activity of teens with gaming addiction (Choi et al., 2018).

How strong and positive children's self-concepts are will depend on their temperament (early-emerging personality) and their environment. In a study of young children ages 3 to 5 in Turkey, those who lived with their biological families had higher and more positive self-concepts than children who lived in foster care or institutions (Ertekin & Berument, 2021). The caretakers' perceptions of the children's self-concepts were associated with their temperament, for instance, their inhibitory control (a predecessor of conscientiousness).

Positive Regard

As the self emerges, infants develop a need for what Rogers called **positive regard**. It includes acceptance, love, and approval from other people, most notably from the mother during infancy. This need is probably learned, although Rogers said the source was not important. The need for positive regard is universal and persistent.

Infants find it satisfying to receive positive regard and frustrating not to receive it or to have it withdrawn. Because positive regard is crucial to personality development, infant behavior is guided by the amount of affection and love bestowed. If the caretaker does not offer positive regard, then the infant's innate tendency toward actualization and development of the self-concept will be hampered.

Infants perceive parental disapproval of their behavior as disapproval of their newly developing self. If this occurs frequently, infants will cease to strive for actualization and development. Instead, they will act in ways that will bring positive regard from others, even if these actions are inconsistent with their self-concept.

Unconditional Positive Regard

Even though infants may receive sufficient acceptance, love, and approval, some specific behaviors may bring punishment. However, if positive regard for the infant persists despite the infant's undesirable behaviors, the condition is called **unconditional positive regard**. By this, Rogers meant that the caregiver's love for the child is granted freely and fully; it is not conditional or dependent on the child's behavior.

Research conducted with three generations of women and with college students demonstrated that the use of conditional positive regard by parents had successfully brought about the behaviors they desired in their children (Assor et al., 2004). However, self-reports from children whose parents used conditional regard demonstrated poorer coping skills, fluctuating levels of self-esteem, lower self-worth, feelings that their parents disapproved of them, and resentment toward their parents relative to people whose parents employed unconditional regard. No such negative consequences were reported by children whose parents did not use conditional regard.

German university students who reported that their parents' caregiving style was characterized by conditional (not unconditional) regard (e.g., lack of emotional warmth, harsh discipline) experienced higher levels of psychological distress and were higher in neuroticism (Rocha Lopes et al., 2015). A systematic review of research on parental warmth versus hostility suggests that positive regard from parents is associated with healthier emotion reactivity and regulation in young people (Tan et al., 2020). Similar patterns emerge for unconditional regard from other adults. For example, high school students who received unconditional positive regard from their teachers were found to score higher in positive self-esteem than those who did not receive unconditional positive regard from their teachers (Nolan, 2008).

An important aspect of the need for positive regard is its reciprocal nature. When people perceive themselves to be satisfying someone else's need for positive regard, they in turn experience satisfaction of that need themselves. Therefore, it is rewarding to satisfy someone else's need for positive regard.

Because of the importance of satisfying the need for positive regard, particularly in infancy, we become sensitive to the attitudes and behaviors of other people. By interpreting the feedback we receive from them (either approval or disapproval), we refine our self-concept. Thus, in forming the self-concept, we internalize the attitudes of other people. The way we regard ourselves is associated with the way our parents regard us, as evidenced by a study with over 350 adolescents in the United Kingdom (Proctor et al., 2021). Another study with college students in Turkey found that self-acceptance was positively correlated with individuals' perceptions of their parents' acceptance of them in childhood (Kuyumcu & Rohner, 2018).

Positive Self-Regard

In time, positive regard will come more from within us than from other people, a condition Rogers called **positive self-regard**. Positive self-regard becomes as strong as our need for positive regard from others, and it may be satisfied in the same way. For example, children who are rewarded with affection, approval, and love when they are happy will come to generate positive self-regard whenever they behave in a happy way. Thus, in a sense, we learn to reward ourselves.

Positive self-regard can be defined as a feeling of contentment with oneself and is related to positive

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positive regard Acceptance, love, and approval from others.

unconditional positive regard Approval granted regardless of a person's behavior. In Rogers' person-centered therapy, the therapist offers the client unconditional positive regard.

positive self-regard The condition under which we grant ourselves acceptance and approval.

mental health (Leising et al., 2013). College students who experience high levels of unconditional positive self-regard report higher authenticity of the self (Murphy et al., 2017). Adolescents aged 16 to 19 with high unconditional positive regard also score high in self-esteem, life satisfaction, and importance of intrinsic motivation (Proctor et al., 2021). A related concept is self-acceptance. In a longitudinal qualitative study of German adults, those who were higher in self-acceptance (as measured by both observer and self-report) used more emotional words in their life narratives, suggesting they were more in touch with their feelings and experienced more well-being, compared to those lower in self-acceptance (Tibubos et al., 2019). Self-acceptance may support coping with the new challenges of old age: In a study of adults in old age, people with stronger self-acceptance were also more appreciating, forgiving, self-empowered, and happier than those lower in self-acceptance (Attari et al., 2018).

Positive self-regard, or self-acceptance, may be especially important for the well-being of people with minoritized identities (Alsaidi et al., 2021; Brooks et al., 2021; Henríquez et al., 2021; Weinstein et al., 2017). For example, in a study of Black young adults in the United States, people who experienced symptoms of depression were less likely to experience suicidal ideation if they had high levels of self-acceptance, compared to people who had low levels of self-acceptance (Brooks et al., 2021). In another study with nearly 900 Colombian migrants in Chile, positive view of the self as connected to one's cultural identity was associated with psychological well-being (Henríquez et al., 2021).

Notably, some studies have also suggested that positive self-regard may not be as prevalent in a collectivist culture such as Japan as it is in a more individualist culture such as the United States (Heine et al., 1999; Joseph & Linley, 2005; Sheldon et al., 2003).

Like positive regard, positive self-regard is reciprocal. When people receive positive regard and develop positive self-regard, in turn they may provide positive regard to others. For example, an early study of this idea included 56 mothers and explored the relationship between their self-acceptance and the extent to which they accepted their children as they were rather than as they wished them to be (Medinnus & Curtis, 1963). The results indicate that self-accepting mothers were more accepting of their children. Also, children's degree of self-acceptance depended to some extent on their mothers' degree of self-acceptance. In more recent research, across ethnically diverse American college students, researchers found that the more self-compassionate people were, the more they accepted their own flaws, and, in turn, the more they accepted their romantic partners' and acquaintances' flaws (Zhang et al., 2020). Another study of Chinese university students found that mindfulness is positively associated with well-being, and this is due in part to the self-acceptance that comes with mindfulness, which is particularly helpful for people who tend to be less tolerant of others (Xu et al., 2016).

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Our regard for ourselves is largely shaped by our parents' and caregivers' regard for us.

Pause for Reflection

What do you think it is about positive self-regard and self-acceptance that confer benefits to well-being?

Conditions of Worth

Conditions of worth emerge from this developmental sequence of positive regard leading to positive self-regard. Positive self-regard is Rogers' version of the Freudian superego, and it derives from **conditional positive regard**. We noted that *unconditional* positive regard involves the parents' or self's love and

conditions of worth To Rogers, a belief that we are worthy of approval only when we express desirable behaviors and attitudes and refrain from expressing those that bring disapproval from others; similar to the Freudian superego.

conditional positive regard Approval, love, or acceptance granted only when a person expresses desirable behaviors.

acceptance of the infant without conditions, independent of the child's behavior.

Conditional positive regard is the opposite. Parents may not react to everything their infant does with positive regard. Some behaviors annoy, disappoint, worry, or bore them, and for those behaviors they may not provide affection or approval. Thus, infants learn that parental affection has a price; it depends on behaving in certain acceptable ways. Children come to understand that sometimes they are prized, and sometimes they are not.

If a parent expresses annoyance every time the infant drops an object out of the crib, the child learns to disapprove of themself for behaving that way. External standards of judgment become internal and personal. In a sense, then, children come to punish themselves as their parents did. Children develop self-regard only in situations that have brought parental approval, and in time the self-concept thus formed comes to function as a parental surrogate.

As a result, children develop conditions of worth. They come to believe they are worthy only under certain conditions, the ones that brought parental positive regard and then personal positive self-regard. Having internalized their parents' norms and standards, they view themselves as worthy or unworthy, good or bad, according to the terms their parents defined.

A study of adolescents found that when their mothers used conditional (not unconditional) positive regard to reward them for academic achievement and punish them for nonachievement, their feelings of self-worth became erratic (Assor & Tai, 2012). When the adolescents received good grades, for example, they behaved in self-aggrandizing ways. But when they did not receive good grades, they felt shame and tended to downplay or devalue their sense of self-worth.

Children thus learn to avoid certain behaviors and no longer function freely. Because they feel the need to evaluate their behaviors and attitudes so carefully and refrain from taking certain actions, they are prevented from fully developing or actualizing the self. They may inhibit their development by living within the confines of their conditions of worth.

In a study of over 500 college students from the United States, Russia, and China, the more conditional (not unconditional) regard young adults reported in past and present relationships, the bigger the difference between their self-concept and their ideal self and the less authenticity felt within their relationships (Lynch & Sheldon, 2017). Outside of intimate relationships, conditional regard can play a role in undermining well-being. For example, in the context of academics, students experienced lower self-esteem and higher burnout when parents and teachers gave conditional regard (i.e., rewarded success, punished the lack of success) as evidenced in a study of over 3,400 young adolescents (ages 12–16) (Lavrijsen et al., 2023).

Incongruence

Not only do children learn, ideally, to inhibit behaviors deemed unacceptable, but they also may come to deny or distort unacceptable ways of perceiving their experiential world. By holding an inaccurate perception of certain experiences, they risk becoming estranged from their true self. We learn to evaluate experiences, and to accept or reject them, not in terms of how they contribute to our overall actualization tendency but in terms of whether they bring positive regard from others. This leads to **incongruence** between the self-concept and the experiential world, the environment as we perceive it.

Rogers suggested that experiences that are incongruent or incompatible with our self-concept become threatening and are manifested as anxiety. For example, if our self-concept includes the belief that we love all humanity, once we meet someone toward whom we feel hatred, we are likely to develop anxiety.

Hating is not congruent with our image of us as loving persons. To maintain our self-concept, we must deny the hatred. We defend ourselves against the anxiety that accompanies the threat by distorting it, thus closing off a portion of our experiential field. The result is a rigidity of some of our perceptions.

This idea aligns with the phenomenon of "cognitive dissonance"—a mental state characterized by tension, negative affect, and anxiety caused by an observed misalignment of our attitudes with our actions (Festinger, 1957; Elliot & Devine, 1994). People tend to deal with cognitive dissonance by changing their attitude or making an excuse for it. Some research suggests that people whose personalities feature a tendency to act in ways that will reap rewards (i.e., high in approach motivation) deal with cognitive dissonance more effectively and quickly than others (Harmon-Jones et al., 2011).

As alluded to earlier, another way by which researchers capture whether people feel the personalities and lifestyles they enact reflect their true selves is by measuring "authenticity." Researchers find that the more people report being authentic (exhibit personalities that reflect their self-concept), the more mindful and emotionally intelligent they are (Tohme & Joseph, 2020).

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incongruence A discrepancy between a person's self-concept and aspects of his or her experience.

Congruence and Psychological Well-Being

Our level of psychological adjustment and emotional health is a function of the degree of congruence or compatibility between our self-concept and our experiences. Psychologically healthy people are able to perceive themselves, other people, and events in their world much as they really are. Rogers suggested that people high in congruence are open to new experiences because nothing threatens their self-concept. They have no need to deny or distort their perceptions because as children they received unconditional positive regard and did not have to internalize any conditions of worth. They feel worthy under all conditions and situations and are able to use all their experiences. They can develop and actualize all facets of the self, proceeding toward the goal of becoming a fully functioning person and leading what Rogers called "the good life."

Research provides support for this. People who behave in line with their personalities when meeting new people or in daily life experience more well-being, and their personalities are perceived more accurately by others (e.g., Human et al., 2019). In a meta-analysis of 75 research studies and over 36,000 participants from around the world, authenticity was significantly positively associated with psychological well-being and engagement, which is when people are energetically partaking in life activities that express their true selves (Sutton, 2020). That research found that the associations between authenticity and well-being and engagement don't systematically differ based on people's age, gender, or type of participant sample. However, the association with well-being varied by individualism–collectivism: The more individualist the culture, the stronger the association between authenticity and well-being. Self-congruence also facilitates more well-being as it relates to technology. In a study of over 1,000 Chinese adolescents, the more self-congruence people reported, the more psychological well-being they experienced, which was in turn associated with less smart phone addiction (Li et al., 2021).

Pause for Reflection

Do you think people with certain types of personality are more likely to experience incongruence?

fully functioning person Rogers' term for a self-actualizing person, who has developed all facets of the self.

Characteristics of Fully Functioning Persons

To Rogers, the **fully functioning person** is the most desirable end result of psychological development and social evolution (Rogers, 1961). He described several characteristics of fully functioning (self-actualizing) people (refer to Table 10.1). People who score high on fully functioning in the Rogerian sense tend to experience higher levels of life satisfaction, positive thoughts and feelings, and intrinsic versus extrinsic motivation as well as lower levels of negative thoughts and feelings, and anxiety (Proctor et al., 2016). Those who are highly self-actualizing also have distinct personalities when it comes to moral character, scoring higher than those low in self-actualizing in enthusiasm, bravery, honesty, and leadership, for example (Proctor et al., 2016).

Aware of All Experiences

No experience is distorted or denied; all of it filters through to the self. There is no defensiveness because there is nothing to defend against, nothing to threaten the self-concept. Fully functioning persons are open to positive feelings such as courage and tenderness, and to negative feelings such as fear and pain. They are more emotional in the sense that they accept a wider range of positive and negative emotions and feel them more intensely.

Research supports the idea that fully functioning persons have strong emotional experiences, but these tend to be positive. In a study of university students in Turkey, people who were more kind to themselves, mindful, and felt connected to humanity and who judged themselves less and experienced less isolation felt more happiness and satisfaction with life (Proctor et al., 2016). In another study with adults in Singapore, authenticity was associated with quiet ego and self-compassion

Table 10.1 Characteristics of fully functioning persons

Awareness of all experience; open to positive as well as negative feelings
Freshness of appreciation for all experiences
Trust in one's own thoughts, feelings, and behavior
Freedom of choice, without inhibitions
Creativity and spontaneity
Continual need to grow, to strive to maximize one's potential in a state of actualizing

(part of self-concept) and positive life satisfaction (Chew & Ang, 2021). Research with creative writers in Jammu and Kashmir found that those high in self-actualizing were also high in self-awareness, especially of their feelings and reactions (Rather & Khan, 2020). However, research does not support the idea that stronger experiences of negative emotions are associated with psychological development and well-being.

Live Fully and Richly in Every Moment

All experiences are potentially fresh and new. Experiences cannot be predicted or anticipated but are participated in fully rather than merely observed. This criterion is supported by empirical research. Mindfulness, or being mentally present and aware of one's current experience of internal and external stimuli, has been linked to more positive affect and, in turn, higher life satisfaction, as evident in a study of American undergraduates (LeBlanc et al., 2021). In another study of university students in India, people who were better at regulating their emotions were also better at being mindful of the moment, which was in turn related to better health and well-being (Mandal et al., 2017).

Trust in Their Own Organism

By this phrase, Rogers meant that fully functioning persons trust their own reactions rather than being guided by the opinions of others, by a social code, or by their intellectual judgments. Behaving in a way that feels right is a good guide to behaving in a way that is satisfying. Rogers did not suggest that fully functioning persons ignore information from their own intellect or from other people. Rather, he meant that all data are accepted as congruent with the fully functioning person's self-concept.

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Rogers suggested that fully functioning persons allow themselves to experience a wide range of feelings, to live fully in each moment, and to trust themselves.

Nothing is threatening; all information can be perceived, evaluated, and weighed accurately. Thus, the decision about how to behave in a particular situation results from a consideration of all experiential data. Fully functioning persons are unaware of making such considerations, however, because of the congruence between their self-concept and experience, so their decisions appear to be more intuitive and emotional than intellectual.

There is support for the idea that trust in oneself is associated with flourishing. In a set of six studies with nearly 6,500 American participants, researchers found that people who tend to trust in their reactions and their intuitions also tend to experience higher meaning in life (Heintzelman & King, 2016). In a study of emergency medical service nurses, those who engaged in a highly caring approach with their patients experienced high levels of trust in themselves "based on confidence and competence" (Carnesten et al., 2021). Other research suggests that the well-being benefits of spending time in and feeling connected to nature has to do with experiencing increases in trust of oneself (Kryazh, 2019). The author reasoned that trust in the ecological world and diverse life may support trust in the self.

There is also some evidence that well-being and flourishing may result from, or are at least associated with, less susceptibility to social influence (other people's affecting one's thoughts, feelings, and motivations and, in turn, behaviors). In a study of adults in Malaysia and Singapore, people less susceptible to social conformity were higher in emotion-based coping with stressors (Ang & Liang, 2021). That research also found that identification with their collectivist cultures did not make them more susceptible to social conformity, but those with personal opinions consistent with their cultural group had higher cultural identity. Based on a theoretical review of the self-determination literature, the more consistent people's goals are with their selves, personalities, and abilities (i.e., are "self-concordant"), the more persistently people pursue those goals and the more likely they are to attain them over time (Sheldon, 2014). In a study of female adolescent gymnasts, who face extreme physical and psychological challenges, girls who trained and competed in a context that supported their autonomy had better outcomes, including higher well-being, perceived competence, self-esteem, and lower disordered eating (Kipp & Weiss, 2015). But at the same time, relying on others for information and advice can benefit decision making (Rader et al., 2017).

Free to Make Choices Without Constraints or Inhibitions

Fully functioning persons know their future depends on their own actions and not present circumstances, past events, or other people. They do not feel compelled, either by themselves or by others, to behave in only one way. Indeed, people with strong authentic inner compasses, who have strong self-directed values, aspirations, interests, and goals, more highly prioritize meaning and positivity in life, which in turn are associated with higher well-being (Russo-Netzer & Shoshani, 2020). When support or help is needed, people who try to get autonomy-oriented help (i.e., learning how to fix a problem) perform better at work and evince more of an approach- and mastery-oriented personality as compared to people who prefer dependency-oriented help (i.e., asking someone else to fix the problem) (Komissarouk et al., 2017). Other work suggests that people who make choices without constraints or inhibitions, self-reflect more often, and had parental support of autonomy live longer than people who do not have those autonomous characteristics (Weinstein et al., 2019).

Creative and Live Constructively and Adaptively as Environmental Conditions Change

Allied with creativity is spontaneity. Fully functioning persons are flexible and seek new experiences and challenges. They do not require predictability, security, or freedom from tension. Research supports this idea. In a study of over 1,400 people in China, Germany, and the United States, people who coped with the COVID-19 pandemic by engaging more in creative processes felt they grew more in creativity, and this was associated with higher levels of psychological well-being (Tang et al., 2021). Research with single mothers in China who were high in flexibility and spontaneity found that they were better able to adapt to the demands of single parenthood and evinced signs of full functioning, such as self-regard, self-esteem, and life satisfaction (Choy & Moneta, 2002.)

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Rogers theorized that fully functioning persons make choices without undue constraints and creatively adapt to their environments.

A State of Actualizing

Rogers used the word *actualizing*, not *actualized*, to characterize the fully functioning person. The latter term implies a finished or static personality, which was not Rogers' intent. Self-development is always in progress. Rogers wrote that being fully functioning is "a direction, not a destination" (1961, p. 186). If striving and growing cease, then the person loses spontaneity, flexibility, and openness. Rogers' view on age and growth is neatly captured in the word *becoming* in the title of his book, *On Becoming a Person* (1961). Indeed, the more people emphasize growth goals, the more their personalities develop in positive ways, and the more personal well-being and satisfaction in life they experience, according to a study with US university students (Bauer & McAdams, 2004). As we have discussed before, as people get older, their personalities tend to become more positive, and they tend to have better well-being, express care and investment in other people at higher rates, and experience less anger and anxiety (e.g., Shallcross et al., 2013; Sheldon & Kasser, 2001).

Being Fully Functioning Is Not Always Easy

Being fully functioning involves continually testing, growing, striving, and using all of one's potential, a way of life that brings complexity and challenge. Rogers did not describe fully functioning persons as happy, blissful, or contented, although at times they may be. More appropriately, their personality may be described as enriching, exciting, and meaningful. When mature people tell stories about transitions in their life, they cite active struggles and negative experiences as contributing to their growth and happy endings (King, 2001). People high in extraversion, who tend to have exciting experiences, who are highly open to experience, and who seek out meaningful experiences tend to experience high levels of happiness, and a sense of uniqueness accounts for this in a US sample (Koydemir et al., 2014). Norwegian young adults who experienced higher life satisfaction also experienced more pleasantness, and the experience of strong feelings of interest was associated with personal growth (Vittersø & Søholt, 2011). This is mostly consistent with Rogers' proposition that being fully functioning is not always easy, but

he may have overestimated negative experiences and underestimated how consistently happy self-actualizing people tend to be.

Pause for Reflection

How do the characteristics of fully functioning persons correspond to the Big Five personality traits?

Rogers' Person-Centered Therapy

In **person-centered therapy**, Rogers explored the client's feelings and attitudes toward the self and toward other people. He listened without any preconceptions, trying to understand the client's experiential world as the client processed it. Although Rogers considered person-centered therapy the only worthwhile approach to personality assessment, he realized that it was not infallible. By focusing on subjective experiences, the therapist learns only about those events the client consciously expresses.

Experiences that are not in conscious awareness remain hidden. The danger in trying to infer too much about these nonconscious experiences is that the inferences the therapist draws may represent the therapist's own projections more than the client's actual experiences.

Also, what the therapist learns about a client depends on the client's ability to communicate. Because all forms of communication are imperfect, the therapist necessarily will see the client's world of experience imperfectly and incompletely.

Within these limits, Rogers argued that person-centered therapy provides a clearer understanding of a person's experiential world than all other forms of assessment and therapy. One advantage Rogers claimed for his approach is that it does not rely on a predetermined theoretical structure, such as Freudian psychoanalysis, into which the therapist must fit the patient's experiences and challenges.

The only predetermined belief of the person-centered therapist is that the client has inherent value and worth. Clients are accepted as they are. The therapist gives them unconditional positive regard and offers no judgments about their behavior or advice on how to behave. Everything centers on the client, including the responsibility for developing a more actualizing personality and reevaluating relationships.

Rogers opposed assessment techniques such as free association, dream analysis, and case histories. He believed that these techniques made clients dependent on the therapist, who then assumed an aura of expertise and authority. These techniques removed personal responsibility from the clients by giving them the impression that the therapist knew all about them. Clients could conclude that the therapist would then solve their problems and all they needed to do was sit back and follow the expert's instructions. Research has shown that person-centered therapy is more likely to be successful when clients perceive their therapists to:

1. Be empathic and understanding
2. Demonstrate unconditional positive regard for them
3. Exhibit congruence by demonstrating that they are being genuine in the therapeutic relationship (Cain, 2013)

The impact of Rogers' ideas about how therapists should approach supporting their clients (i.e., person-centered approach) has been extremely influential in therapy more generally (Joseph & Murphy, 2012) and is well-positioned to provide a framework for multicultural counseling competence (Quinn, 2012). For example, an American Psychological Association taskforce examining empirically supported methods of therapy concluded that positive regard, empathy, and congruence-genuineness were particularly effective approaches to therapeutic relationships and supported good outcomes (Ackerman et al., 2001, Cornelius-White, 2002). Research examining multiple meta-analyses of psychotherapy backs up those

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One of Rogers' greatest contributions to psychology is person-centered therapy, an approach that provides unconditional positive regard and support for clients' autonomy in making positive personality change.

person-centered therapy Rogers' approach to therapy in which the client is assumed to be responsible for changing their personality.

findings (Norcross, 2011; Norcross & Lambert, 2011). As a specific example, an analysis of three studies on person-centered therapy with patients diagnosed with borderline personality disorder found evidence for the positive effects of this approach (Quinn, 2011).

Pause for Reflection
Do you think the person-centered approach would facilitate your own personal growth?

Encounter Groups

Rogers wanted to bring the benefits of person-centered therapy to a greater number of people in a different and more social context. He developed a group technique in which people could learn more about themselves and how they related to, or encountered, one another. He called his approach the **encounter group** (Rogers, 1970).

Group sizes range from 8 to 15 people. They typically meet 20 to 60 hours over many sessions. They began with no formal structure or agenda. The group facilitators who conduct the sessions are not leaders in the usual sense. They are supposed to establish an atmosphere in which group members could express themselves and focus on how others perceived them. The job of the facilitator is to make it easier for members to achieve self-insight and become more fully functioning. Rogers believed that most (though not all) participants would become more fully functioning.

A large-scale analysis of studies on encounter groups revealed that the results were comparable to traditional psychotherapies (Faith et al., 1995). The analysis also showed that larger groups that met more frequently produced more favorable outcomes than smaller groups that met less often.

More generally, small groups have been established to support positive change in specific skills training (e.g., Brown, 2011), in the context of diverse types of therapy (e.g., psychotherapy, family therapy; Yalom & Leszcz, 2005), and to encourage connection with the self and positive change in personality and interpersonal interactions (sometimes called "T" groups for "sensitivity training"; Cortright et al., 2003; Lieberman et al., 1973). How do small groups work? In a review of the scientific literature on the mechanism of change in small groups, scholars suggest that there are five different sets of ways by which positive change happens (Borek & Abraham, 2018):

1. Group development—how interactions among group members change over time, such as to increasingly trust, rely on, and share a group identity with one another.
2. Dynamic group processes and properties—psychological processes that solidify the group, such as interdependence, shared goals, group identification, cohesion, and unity.
3. Social change processes—patterns of interaction between individual group members (interpersonal), such as social facilitation, learning, and support.
4. Personal change processes—how the group and interpersonal interactions shape individual psychological growth, such as through self-disclosure and feedback and in cognitive change and skill development (intrapersonal).
5. Group design and operating parameters—how the group is organized and the nature of the intervention, including the purpose, size, composition, leadership, and management of the group.

Pause for Reflection
What sort of personality profile do you think would facilitate benefitting from an encounter group?

Assessment in Rogers' Theory

Rogers believed that person-centered interviews, which rely on clients' self-reports, were of greater value than experimental methods. In his view, the more orthodox scientific approaches yielded less information on the nature of personality than did his clinical approach. He said, "I never learned anything from research. Most of my research has been to confirm what I already felt to be true" (quoted in Bergin & Strupp, 1972, p. 314).

Although Rogers did not use laboratory methods to collect data about personality, he did use them to attempt to verify and confirm his clinical observations. He was enthusiastic about research on the nature of the therapy sessions, an idea resisted by many clinicians who saw it as a violation of privacy.

What Rogers did was to introduce what was then a radical procedure (Goldfried, 2007). He recorded and filmed therapy sessions to enable researchers to study the client–therapist interaction. Before Rogers'

encounter groups A group therapy technique in which people learn about themselves and how they relate to (or encounter) one another.

innovation, the only data available from therapy sessions were the therapist's after-the-fact reconstructions—the notes made on the therapy session some time after it was over. In addition to distortions of memory with the passage of time, a written record misses the client's emotional state and body language. Sometimes a facial expression or tone of voice might reveal more than words. With recorded therapy sessions, everything became available for study.

Rogers referred to it as a microscope with which to examine the "molecules of personality change" (1974, p. 120). He always obtained the client's permission to record the sessions, and he found that the presence of the equipment did not impede the course of therapy.

Evaluating Person-Centered Therapy

Rogers and his associates studied how the self-concept changes during the course of therapy. Using qualitative and quantitative techniques in the scientific tradition (despite Rogers' claim of not being a scientist), they analyzed the therapy sessions. By applying rating scales and content analyses of a client's verbalizations, they investigated changes in the self-concept.

The Q-Sort Technique

Much of the research used the **Q-sort technique**, a procedure developed by William Stephenson (1953). In this technique, clients sort a large number of statements about the self-concept into categories that range from most descriptive to least descriptive. Thus, the Q-sort is a way of empirically defining the client's self-image.

Example Q-sort statements include the following:

- I enjoy being alone.
- I feel helpless.
- I am emotionally mature.

The Q-sort can be used in several ways. For example, after sorting the statements (called the Q-set) in terms of the perceived self, clients can be asked to sort the same statements in terms of an ideal self, that is, the person they would most like to be. Applying the correlational method, Rogers used Q-sort responses to determine how closely a client's self-image or perceived self corresponded to the ideal self.

He also noted how greatly the self-concept changed from the period before therapy to the period following therapy. For one client, identified as "Mrs. Oak," the data yielded an initial correlation coefficient of $r = .36$ between perceived self and ideal self. A year after therapy, the correlation coefficient increases to $r = .79$, indicating to Rogers that Mrs. Oak's perceived self had become much more congruent with her ideal or desired self (Rogers, 1954). He concluded that this dramatic change reflected an increase in emotional health.

Table 10.2 Mrs. Oak's Q-sort statements of perceived self before and after therapy

Self before Therapy	Self 12 Months after Therapy
I usually feel driven.	I express my emotions freely.
I am responsible for my troubles.	I feel emotionally mature.
I am really self-centered.	I am self-reliant.
I am disorganized.	I understand myself.
I feel insecure within myself.	I feel adequate.
I have to protect myself with excuses, with rationalizing.	I have a warm emotional relationship with others.

Source: From Rogers, C. R. (1954). The case of Mrs. Oak: A research analysis. In C. R. Rogers & R. F. Dymond (Eds.), *Psychotherapy and personality change*. University of Chicago Press.

Mrs. Oak chose different Q-sort phrases to describe herself before and after therapy. Prior to her sessions with Rogers, she saw her self-image as dependent and passive. She also felt rejected by other people. After the course of therapy, Mrs. Oak believed she was more like the self she really wanted to be. She felt more secure, less fearful, and better able to relate to other people (refer to Table 10.2).

Research with the Q-Sort A study by Rogers' associates measured the discrepancy between perceived self and ideal self in 25 clients (Butler & Haigh, 1954). The researchers found that the discrepancy decreased over time during and following therapy. Before therapy, the average correlation coefficient between perceived self and ideal self was low, $r = -.01$. After therapy, $r = .31$.

In a classic study, college students completed the Q-sort list to test Rogers' proposition that fully

Q-sort technique A self-report technique for assessing aspects of the self-concept.

functioning persons are open to all experiences, whereas psychologically unhealthy people erect defenses to protect themselves against experiences that threaten their self-image (Chodorkoff, 1954). A separate Q-sort description of each subject was prepared by clinicians who based their reports on a variety of data, including responses to the Thematic Apperception Test and the Rorschach inkblot test. Based on these clinical measurements, the students were divided into good- and poor-adjustment groups.

Measures of perceptual defense against material perceived to be threatening were obtained from the participants' reactions to neutral words such as *table* and to allegedly threatening words such as *penis.* The results indicated that all participants were slower to perceive threatening words than neutral words, but this response was more marked in the defensive participants of the poorly adjusted group. Significantly less perceptual defense was demonstrated by people in the good-adjustment group, presumed to be psychologically healthier. With regard to agreement between the students' self-descriptions and the clinicians' descriptions, researchers found that the closer the two sets of Q-sort statements, the better adjusted that person was found to be.

More recently, a sexual satisfaction Q-sort technique has been developed in which people sort 63 statements concerning their behaviors, feelings, and experiences during sexual satisfaction. Initial findings suggest that most people taking the test sort their sexual experiences into one or more of four categories: emotional and masculine, relational and feminine, partner focused, or orgasm focused (McClelland, 2014a, 2014b). The Q-sort technique has also been used to assess the Big Five personality traits, which are reported more honestly and in a less social-desirability-biased way (Fluckinger, 2014). In a study of the development of openness to experience in individuals from age 3 to 23 in the United States, observer descriptions of participants were coded according to the California Child Q-set (when the participants were young children) and the California Adult Q-set (when they were adults). Those Q-sets each consist of 100 statements about the individual's personality, cognitive, and social characteristics (Block & Block, 1980). The longitudinal study found consistency in individuals' openness to experience over time (Gjerde & Cardilla, 2009). Another longitudinal study in Sweden employing that Q-sort measure found that ego control and ego resiliency remained relatively stable in individuals from age 2 to 33 (Syed et al., 2020). Furthermore, those measures of ego strength were associated with adult well-being, and this link was largely accounted for by Big Five personality traits.

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Carl Rogers saw human nature as intrinsically growth-directed. Even through challenges, we are motivated to be our best selves—we have a self-actualizing tendency.

Measuring Personal Experience

Although Rogers did not use psychological tests to assess personality, other psychologists have devised tests to measure aspects of the experiential world based on his theories. The Experience Inventory (Coan, 1972), a self-report questionnaire, attempts to assess openness or receptivity to experience, a characteristic of the fully functioning person. The Experiencing Scale (Gendlin & Tomlinson, 1967) measures people's level of self-trust. For this measure, people may talk about whatever they choose, and their recorded comments are later rated for degree of self-trust; for example, how much they claim their feelings are an important source of information on which to base behavior, or how much they deny that personal feelings influence their decisions.

The Experiencing Scale has been used with person-centered therapy. For example, an early study found that people who made the greatest improvement during therapy grew in self-trust from before therapy to after therapy. Those who made little improvement during therapy demonstrated a small or no increase in self-trust over the period. Psychological well-being was positively associated with self-trust (Klein et al., 1969). More recently, this measure has been used to assess reflective self-awareness in patients with depression and/or borderline personality disorder (Brockmann et al., 2018).

Pause for Reflection

What are the strengths and weaknesses of the Q-sort and Experiencing scales?

Questions About Human Nature

On the issue of free will versus determinism, Rogers' position is clear. Fully functioning persons have free choice in creating their selves. In other words, no aspect of personality is predetermined for them. On the nature–nurture issue, Rogers gave prominence to the role of the environment. Although the actualization tendency is innate, the actualizing process itself is influenced more by social than by biological forces.

Childhood experiences have some impact on personality development, but experiences later in life have a greater influence. Our present feelings are more vital to our personality than the events of our childhood.

Rogers recognized a universal quality in personality when he noted that fully functioning persons share certain characteristics. However, we may infer from his writings that there is opportunity for uniqueness in the ways these characteristics are expressed. The ultimate and necessary goal of life is to become a fully functioning person.

A personality theorist who credits people with the ability, motivation, and responsibility to understand and improve themselves obviously views people in an optimistic and positive light. Rogers believed we have a basically healthy nature and an innate tendency to grow and fulfill our potential. Rogers never lost this optimism. In an interview at the age of 85, he said, "in working with individuals and working with groups my positive view of human nature is continually reinforced" (1987, p. 118).

In Rogers' opinion, we are not doomed to conflict with our selves or with our society. We are not ruled by instinctive biological forces or controlled by events of the first five years of life. Our outlook is progressive rather than regressive, toward growth rather than stagnation. We experience our world openly, not defensively, and we seek challenge and stimulation instead of the security of the familiar.

Through Rogers' person-centered therapy, people are able to overcome difficulties by using their inner resources, the innate drive for actualization.

> I am quite aware that out of defensiveness and inner fear individuals can and do behave in ways which are incredibly cruel, horribly destructive, immature, regressive, antisocial, hurtful. Yet one of the most refreshing and invigorating parts of my experience is to work with such individuals and to discover the strongly positive directional tendencies which exist in them, as in all of us. (Rogers, 1961, p. 27)

The urge to become a fully functioning person benefits society as well. As more people in a given culture become self-actualizing, the improvement of society will naturally follow, especially as individuals invest in causes bigger than themselves.

Reflections on Rogers' Theory

Criticisms

Rogers insisted that the only way to explore personality is through person-centered therapy which examines a person's subjective experiences. He did this by listening to a client's self-reports. Critics charge that he ignored those factors of which the client was not consciously aware but that could influence behavior. People may distort reports of their subjective experiences, repressing some events and elaborating on or inventing others, to conceal their true nature and present an idealized self-image.

More recent critiques focus on the problem of letting the client lead their growth as this might encourage the subtle influence of the therapists' own biases. Specifically, if therapists take a nondirective approach with their clients, they may not check their own expectations, preferences, and biases and may not share them explicitly with their clients to assess whether they match their clients' goals, and, in turn, subtly push their clients in the direction of their own thinking (Margolin, 2020).

The Influence of World War II on Person-Centered Therapy

Rogers' person-centered psychotherapy quickly became popular. Its rapid acceptance was fostered in part by social circumstances in the United States at the end of World War II (1945). Veterans returning from service overseas needed help readjusting to civilian life. The result was a demand for psychologists and for a counseling technique they could master and put into practice quickly.

Training in traditional psychoanalysis required a medical degree and a lengthy period of specialization. However, "person-centered psychotherapy," wrote one analyst, "was simple, informal, and brief, and it required little training" (DeCarvalho, 1999, p. 142).

More than 400 college counseling centers based on Rogers' teachings were established after World War II under the auspices of the Veterans Administration to help returning veterans adjust to civilian life. Client-centered therapy received an enormous boost, and hundreds more colleges established their own counseling centers.

Rogers later acknowledged that the stresses of post–World War II America had catapulted his method and his name to prominence and worldwide fame as a leader in a new approach to understanding and treating personality dysfunction (Barrett-Lennard, 2012; McCarthy, 2014).

Acceptance of Rogers' Therapy

Rogers' therapy has since found broad application not only as a treatment for mental health challenges and pathology but also as a means of enhancing personal growth. In the business world, it has been used as a training method for managers. In the helping professions, it is used to train clinical psychologists, social workers, and counselors.

In addition, psychotherapists of many different orientations have accepted some of Rogers' core concepts in their therapeutic work with clients. Thus, the person-centered approach remains influential in counseling and psychotherapy (Bohart, 2014; Hazler, 2011; Kirschenbaum & Jourdan, 2005; Patterson & Joseph, 2007).

More than 200 training centers, mostly in Europe, promote Rogers' form of therapy. In addition, several dozen journals are devoted to research and application of Rogers' theory (Murdock, 2008). The journal *Person-Centered & Experiential Psychotherapies* began publication in 2002 and remains influential today. Work on Rogers' theory has also contributed to be featured in journals of positive and humanistic psychology.

Rogers' Personality Theory

Rogers' personality theory, although less influential than his psychotherapy, has also received wide recognition, particularly for its emphasis on the self-concept. However, Rogers did not believe he had influenced academic or scientific psychology. Nonetheless, his theory and therapy have stimulated research on the nature of psychotherapy, the client–therapist interaction, positive regard, and the self-concept. His ideas have had a significant impact on psychology's theoretical and empirical definitions of the self.

Rogers' background was a unique combination of clinic, lecture hall, and laboratory. He drew on his considerable experience with clients and on the intellectual stimulation of colleagues and students. He attracted large numbers of followers who continue to test his ideas in the clinic and in the laboratory.

Pause for Reflection

Are there other strengths and weakness to Rogers' theory not discussed here?

DEI Spotlight

Rogers' Theory and Diversity, Equity, and Inclusion

Rogers' theory focuses on people's inclination to grow, to be self-actualizing, and the effects of others' and the self's positive regard on the self-concept. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individuals, Family, and Society. Here we focus on Carl Rogers' theory and the unique experiences of people with minoritized gender and sexual identities. Jay Crowter, a person-centered therapist whose work focuses on diversity, has applied Carl Rogers' theory to highlight the unique experiences and challenges that trans people face (Crowter, 2022). At the center of this exploration is Rogers' focus on becoming one's true self, or self-actualizing. Crowter writes,

> For some people, the answer to "who am I, *really*?" is at least in part answered, "I am trans." Trans coming out stories often tell of peeling back a mask, rejecting who one feels one should be, and ceasing living to meet others' expectations (Lee, 2015), aligning closely with Rogers (1961) growthful directions. Some trans people report a journey of self-discovery and a subsequent need to be themselves despite social pressures otherwise (Moolchaem et al., 2015). Being trans has been described as "living

DEI Spotlight, continued

Rogers' Theory and Diversity, Equity, and Inclusion

> [one's] authentic truth" (Dobson, 2019, p. 2). Transitioning has even been referred to as "self-actualisation" (Lovelock, 2017, p. 450). As such, transness can be seen as an expression of "that self which one truly is" (Rogers, 1961, p. 166). (Crowter, 2022, p. 296)

According to Rogers' theory, individuals' self-regard largely reflects the regard that others give them. Individuals internalize the conditions of their worth—whether and for what reasons others will give them positive regard. Crowter writes, "Cultural attitudes toward gender diversity are far from unconditionally positive" (p. 298) and cites the existent of conversion therapy, which assumes "that any sexual orientation or gender identity is 'inherently preferable' and which attempts to change or suppress a client's sexual orientation or gender identity" (p. 298), as evidence of conditional positive regard when it comes to gender identity. Consistent with Rogers' arguments that conditional regard undermines individuals' well-being, Crowter cites research finding that exposure to conversation therapy is associated with less psychological well-being and higher chances of suicide attempts for trans people (Turban et al., 2019).

> Dealing with these external pressures can create incongruence: Livingstone (2011, p. 139) reported that "the majority of [trans] people who undertake counseling arrive emotionally and psychologically bent under the weight of objectifying conditions of worth, received implicitly and explicitly from both immediate family and society as a whole." Rogers' (1959) Theory of Personality proposed that conditions of worth can lead to an individual becoming estranged from themselves, living as who others want them to be rather than their true self. (p. 299)

As Rogers contended, the regard given by people's early caregivers, usually parents, has a strong effect on people's identity development. Related to these issues is a program of research that examines whether and how individuals' parents' support of their autonomy shapes how those individuals respond to same-sex sexual attraction (Weinstein et al., 2012). These scholars argue that individuals who grow up with unsupportive parents who hold homophobic attitudes may avoid exploring aspects of themselves that are viewed as unacceptable. For people whose fathers were especially low in autonomy support and high in homophobic attitudes, there existed a bigger sexual identity incongruence: Individuals explicitly identify as heterosexual but implicitly identify with being gay or lesbian and evince antigay reaction formation. The researchers find that contingent self-esteem links parenting style and incongruence.

Crowter highlights that Rogers' theory suggests that to intervene on such harm, individuals, society, and especially therapists can support trans people given "any social support can provide positive regard that disempowers conditions of worth" (p. 302). Congruence, when it comes to gender identity, may give rise to "feeling 'gender euphoria'" (Hope, 2019, p. 14). This term was coined as the antonym to the medical term "gender dysphoria" which is used in the DSM (Hope, 2019). It means the "sense of fulfilment or joy that comes from living as the gender you feel yourself to be" (Guardian, 2019). "Such euphoria is polar opposite to the despair of not being oneself that Rogers (1961) spoke of" (p. 303).

The implication of this analysis is that the person-centered approach entails support for the self-actualization of all people, and it underscores the ways by which societal attitudes can undermine the well-being of minoritized people:

> Rogers (1959) theory reframes trans experiences and provides an insight that honors the struggles of being trans but also celebrates the joyful authenticity it can bring. Equally, it places responsibility for much of the distress trans people experience squarely in the hands of those who perpetuate transprejudice, rather than continuing the notion that it is an inherent part of being trans. (p. 304)

Chapter Summary

Rogers' person-centered theory proposes that we are conscious, rational beings not controlled by unconscious forces or past experiences. Personality can only be understood by a phenomenological approach, that is, from an individual's own viewpoint based on their subjective experiences (one's experiential world).

Our goal in life is self-actualization, an innate tendency toward growth and development. The organismic valuing process evaluates life experiences in terms of how well they serve the actualizing tendency. Experiences that promote actualization will be sought; experiences that hinder it will be avoided. There is ample evidence for humans' tendency to grow, even through difficulties.

Positive regard is an acceptance, love, and approval from others and, eventually, from ourselves. Infants are especially sensitive to positive regard from caretakers. In unconditional positive regard, the caretaker's or another person's love and approval are granted freely and are not conditional on the child's behavior. When love and approval are conditional, a state of conditional positive regard exists. Once we internalize the attitudes of others, positive regard comes from ourselves (positive self-regard).

Incongruence develops between the self-concept and behaviors that threaten the self-image. We defend against anxiety by denying threatening aspects of the experiential field. Our lives are more satisfying to the extent that we behave in ways that are congruent with our true selves. Much research supports the contention that having positive regard for the self, a positive self-concept, and congruence are associated with higher psychological well-being.

The fully functioning (self-actualizing) person represents the peak of psychological development. Characteristics of the fully functioning person are an awareness of all experiences, no conditions to defend against, the ability to live fully in each moment, trust in one's self, a sense of freedom and personal power, creativity, and spontaneity. Research supports the existence of most of these patterns but does not suggest that a self-actualizing person experiences negative feelings as much as they experience positive feelings.

Rogers' optimistic image of human nature encompassed a belief in free will, the prominence of environment over heredity, and some universality in personality. Individuals and societies can grow unhampered by past events.

Personality can be assessed in terms of subjective experiences as revealed in self-reports. In the person-centered approach, the therapist gives the client unconditional positive regard. Rogers opposed free association and dream analysis because they make the client dependent on the therapist. By recording therapy sessions, Rogers enabled researchers to investigate the nature of the client–therapist interaction.

The Q-sort technique, in which clients sort statements about their self-concept into categories ranging from most to least descriptive, is a way of quantifying the self-image and personality. Q-sort research has revealed a greater correspondence between perceived self and ideal self after therapy. The better adjusted a person is, the greater the agreement between self-descriptions and descriptions made by others. Discrepancies between perceived self and ideal self indicate poor psychological adjustment.

Rogers' work has been criticized for ignoring the impact of unconscious forces and for allowing subtle forms of therapist bias to affect the client. Nevertheless, his person-centered approach to therapy remains influential in the fields of counseling and psychotherapy.

Review Questions

1. In what ways did Carl Rogers' clinical experience and method differ from Sigmund Freud's?
2. According to Rogers and some research findings, what is the role of self-insight and environment in shaping personality change?
3. Define the actualizing tendency and describe evidence for it in four sentences.
4. What is the organismic valuing process?
5. Describe positive regard and how it can be unconditional or conditional.
6. How are positive regard from others and positive regard from the self connected?
7. Compare and contrast incongruence and congruence and their implications for psychological well-being.
8. What are the characteristics of fully functional (self-actualizing) persons? For each, describe whether research evidence is strong or weak.
9. Summarize the person-centered approach to therapy in six sentences.
10. What is an encounter group?
11. Compare and contrast the Q-sort technique with measures of personal experience.
12. What are the strengths and weaknesses of Rogers' approach to personality and the self?

Suggested Readings

- Barrett-Lennard, G. (2013). Origins and evolution of the person-centered innovation in Carl Rogers' lifetime. In M. Cooper, M. O'Hara, P. Schmid, & A. Bohart (Eds.), *Handbook of person-centered psychotherapy and counseling* (2nd ed.). Palgrave Macmillan, pp. 32–45. An overview of Rogers' early life and family background, including his travels and the World War II era that influenced his outlook and the acceptance of his form of therapy.
- Cornelius-White, J. (2013). *Carl Rogers: The China diary.* CreateSpace Independent Publishing. A replica of the diary Rogers kept at age 20 in China (including his unique spelling and grammar!). A foreword by his daughter provides her views.
- Evans, R. I. (1968). *Carl Rogers: The man and his ideas.* Dutton. Interviews with Rogers on the evolution of the self, techniques of person-centered therapy, and applications of his theory to education. Contrasts Rogers' humanistic views with B. F. Skinner's behaviorist views.
- Kirschenbaum, H. (1979). *On becoming Carl Rogers.* Delacorte Press. (2009). *The life and work of Carl Rogers.* American Counseling Association. Biographies of Rogers and his contributions to humanistic psychology and psychotherapy.
- Milton, J. (2002). *The road to Malpsychia: Humanistic psychology and our discontents*. Encounter Books. A cultural and social history of the humanistic psychology movement, including an assessment of the contributions of Carl Rogers.
- Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy.* Houghton Mifflin. Summarizes Rogers' views on psychotherapy, especially problems in communication and interpersonal relations. Discusses the effects of enhanced personal growth on personal and family life.
- Rogers, C. R. (1967). Autobiography. In E. G. Boring & G. Lindzey (Eds.), *A history of psychology in autobiography* (Vol. 5, pp. 341–384). Appleton-Century-Crofts. Rogers' assessment of his work and the influence of his early experiences.
- Rogers, C. R. (1974). In retrospect: Forty-six years. *American Psychologist, 29,* 115–123. Rogers evaluates the impact of his work on the fields of counseling, psychotherapy, education, leadership, and international relations and on the empirical investigation of subjective phenomena.
- Rogers, C. R. (1980). *A way of being.* Houghton Mifflin. Presents the work of Rogers' later years concerning individual and group psychotherapy, the helping professions, scientific progress, and personal growth.
- Rogers, C. R. (1989). *The Carl Rogers reader.* Houghton Mifflin. A selection of Rogers' writings over 60 years, edited by Howard Kirschenbaum and Valerie Henderson. Includes personal recollections, case studies, and essays on personality change, psychotherapy, education, marriage, aging, international relations, and world peace.

Part 6

The Cognitive Approach

The word *cognition* means the act or process of knowing, being aware, and thinking. The cognitive approach to personality focuses on the ways in which people come to know their environments and themselves. It deals with the question of how we perceive, evaluate, learn, think, make decisions, and solve problems.

This approach to personality focuses exclusively on conscious mental activities. In the cognitive approach, we will not find needs, drives, or emotions as separate activities of the personality. Instead, they are aspects of personality under the control of the cognitive processes.

Contemporary psychoanalysts acknowledge the importance of cognitive processes. So did Erikson, who, as we learned, granted greater autonomy to the ego and to cognitive functioning. Humanistic psychologists Maslow and Rogers also dealt with perceptions, how we evaluate and mentally process our experiences. Allport wrote about human reasoning, and Adler proposed a creative self, which results from our perception or interpretation of experience. Social-learning theorists (Chapter 13) also invoke cognitive processes.

The difference between these approaches and George Kelly's cognitive theory of personality is that Kelly attempted to describe *all* aspects of personality, including its emotional components, strictly in terms of cognitive processes.

Chapter 11

It occurred to me that what seemed true of myself was probably no less true of others. If I initiated my actions, so did they. —George Kelly

George Kelly: Personal Construct Theory

Learning Objectives

11.1 Compare and contrast Kelly's theory with that of psychoanalysts and developmental stage theorists, providing three examples of similarities and differences.

11.2 Define personal construct.

11.3 Outline how personal constructs are adaptive.

11.4 Identify and define the categories of personal constructs, providing examples for each.

11.5 Explain how the Role Construct Repertory (REP) Test works.

11.6 List the empirical correlates of personal constructs.

11.7 Identify the positive effects of cognitive complexity.

11.8 Describe the fixed-role approach to therapy in four sentences.

11.9 Compare and contrast the assessment techniques of interviewing and self-characterization sketches.

11.10 Summarize Kelly's theory of personality in five sentences.

The Cognitive Movement in Psychology

Kelly's **personal construct theory** of personality differs substantially from every other approach discussed in this book. Kelly warned us that we would not find in his system such familiar concepts as the unconscious, the ego, needs, drives, stimuli and responses, and reinforcement—not even motivation and emotion. The obvious question is, how can we understand the human personality without considering these constructs, especially motivation and emotion?

personal construct theory Kelly's description of personality in terms of cognitive processes: We interpret behaviors and events and use this understanding to guide our behavior and to predict the behavior of other people.

Kelly's answer was that each person creates a set of cognitive constructs about the environment. By that he meant that we interpret and organize the events and social relationships of our lives in a system or pattern. On the basis of this pattern, we make predictions about ourselves and about other people and events, and we use these predictions to formulate our responses and guide our actions. Therefore, in order to understand personality, we must first understand human patterns, the ways we organize or construct our world. According to Kelly, our interpretation of events is more important than the events themselves.

Like Maslow, Kelly was opposed to the behavioral and the psychoanalytic approaches to the study of personality. He viewed them both as denying the human ability to take charge of our own lives, to make our own decisions, and to pursue our chosen course of action.

He argued that behaviorism understood people as merely passive responders to stimuli in their environment, and that psychoanalysis understood people as passive responders to their unconscious forces. In contrast, "for Kelly, [people] are forms of motion and we propel ourselves. No one or no thing does it to us" (Fransella & Neimeyer, 2003, p. 25).

An Experiential-Based Theory

The personality theory Kelly offered derived from his experience as a clinician. He concluded that people function in the same way scientists do. Scientists construct theories and hypotheses and test them against reality by performing experiments in the laboratory. If the results of their experiments support the theory, the theory is retained. If the data do not support the theory, the theory must be rejected or modified and retested.

As we have discussed, this is how psychologists who study personality typically proceed. Yet Kelly believed that psychologists do not attribute to their clients the same intellectual and rational abilities they ascribe to themselves. It is as if psychologists have two theories about human nature, one that applies to scientists and their way of looking at the world, and another that applies to everybody else, Kelly argued.

Reflecting on early theories of personality, Kelly observed that clinical psychologists of his time underestimated their clients' ability to function rationally, as being motivated by all sorts of conflicting drives, or as victims of rampant unconscious forces. Thus, human beings are believed to function largely on an emotional level, unlikely to use their cognitive processes to learn, think, evaluate experiences, or solve problems. Surely this is quite unlike the way psychologists function.

But Kelly argued that all people, whether therapists, clients in therapy, or people outside of the therapeutic context, are concerned with predicting and controlling the events in their lives, and all are capable of doing so rationally.

Like scientists, all of us construct theories, which Kelly called *personal constructs*, by which we try to predict and control the events in our lives. He proposed that the way to understand someone's personality is to examine their personal constructs.

Kelly and the Cognitive Movement

How does Kelly's cognitive theory fit with the cognitive movement that began around 1960 and greatly influenced modern mainstream experimental psychology? Despite the similarity in terminology, the cognitive movement has not embraced Kelly's work because the theory is not consistent with the movement's subject matter and methods.

Kelly's approach is that of a clinician dealing with the conscious constructs by which people arrange their lives. In contrast, cognitive psychologists are interested in both cognitive variables and overt behavior, which they study primarily in an experimental, not a clinical, setting. Also, cognitive psychologists do not limit their focus to personality. They study how the mind works like a computer, overt behavior, and learning broadly. They believe that cognitive processes such as learning influence a person's response to a given stimulus situation.

Although cognitive psychology took hold some time after Kelly proposed his explanation of personality, his theory had little influence on it. The two approaches share the term *cognitive*, with its implied interest in conscious activities, but little else. Kelly's recognition of the importance of cognitive processes is noteworthy, but we must place it in perspective. It is not part of mainstream psychology as defined by cognitive psychologists, but that does not detract from its usefulness for studying personality.

The Life of Kelly (1905–1967)

George Kelly was born on a farm in Kansas. An only child, he received a great deal of attention and affection from his parents, who were Christian fundamentalists, like Rogers' parents. They were committed to helping others but were also strict about their own and their son's behavior, opposing activities like dancing and card playing. When Kelly was 4 years old, the family traveled by covered wagon to Colorado to try farming but soon returned to Kansas.

An Erratic Education

Kelly's early education was erratic and conducted as much by his parents as by school teachers. At 13, he went to high school in Wichita and lived largely independently from his parents from that point on. In 1926, he earned a bachelor's degree in physics and mathematics from Park College in Parkville, Missouri. But his interests had shifted from science to social problems. Kelly's future was uncertain.

He worked briefly as an engineer and then took a teaching job at a labor college in Minneapolis. Next, he became an instructor in speech for the American Banking Association and taught citizenship courses to people who had immigrated to the United States from other countries. He then enrolled in graduate school and worked to earn a master's degree in educational sociology from the University of Kansas in Lawrence. Accepting a job offer from a junior college in Iowa, Kelly taught various courses and the drama program.

No Interest in Psychology

At the beginning of his career, there were no clear signs that he was inclined toward psychology. In college, he had not been impressed by the coursework in the field:

> In the first course in psychology, I sat in the back row of a very large class, tilted my chair against the wall, made myself as comfortable as possible, and kept one ear cocked for anything interesting that might turn up. One day the professor, a very nice person who seemed to be trying hard to convince himself that psychology was something to be taken seriously, turned to the blackboard and wrote an "S," an arrow, and an "R." Thereupon I straightened up in my chair and listened, thinking to myself that now, after two or three weeks of preliminaries, we might be getting to the meat of the matter. (Kelly, 1969, p. 46)

Kelly paid attention for several more class meetings and then gave up. He said he could not understand what the arrow connecting the stimulus (S) and the response (R) stood for. The traditional behaviorist, experimental approach to psychology had failed to spark his interest. He also explored psychoanalysis, which was not successful in grabbing his attention either. He wrote, "I don't remember which one of Freud's books I was trying to read, but I do remember the mounting feeling of incredulity that anyone could write such nonsense, much less publish it" (1969, p. 47).

Finding Himself and Psychology

Kelly's professional training took a turn in 1929 when he was awarded a fellowship at the University of Edinburgh, Scotland. During his year there, he developed an interest in psychology and earned a Bachelor of Education degree. He returned to the United States for doctoral studies at the State University of Iowa and received his PhD in psychology in 1931.

Finding an Intellectual Approach to Counseling

After graduating with his PhD, Kelly began work at Fort Hays Kansas State College in the midst of the economic depression of the 1930s. There was no money to conduct research in physiological psychology, the specialty in which he had trained, so he switched to clinical psychology for which there was a need. He developed a clinical psychology service for the local public school system and for the students at his college. He established traveling clinics, going from school to school, which gave him the opportunity to work with people who faced a variety of challenges and to try different approaches to treatment.

Kelly was not committed to any particular therapeutic technique or to a specific theory about the nature of personality. He felt free to use traditional methods of assessment and treatment as well as those of his own design. His approach to therapy was to assume that each new patient was just as much a scientist as himself (Routh, 2011).

His clinical experiences strongly influenced the nature of his personal construct theory. The people he treated tended not to be experiencing or dealing with chronic psychological disorders or acute mental health crises. Rather, his patients were students who had been referred by their teachers for counseling to cope with common life stressors and who tended to be capable of discussing their concerns rationally.

In the classroom, we are taught to analyze, to think and process information logically. This intellectual approach carried over from the classroom to the counseling situation. Had circumstances placed Kelly during his formative professional years at work with people with schizophrenia in a mental institution, for example, his theory might not have depended so heavily on cognitive information-processing abilities.

Becoming a Major Force

World War II interrupted Kelly's academic career. He joined the U.S. Navy and served as a psychologist in the Bureau of Medicine and Surgery in Washington, DC.

When the war ended in 1945, he taught for a year at the University of Maryland before joining the faculty of Ohio State University, replacing Carl Rogers.

There he spent 19 years teaching, refining his personality theory, and conducting research. Kelly also lectured at universities throughout the world about how his personal construct theory of personality could be used to resolve international tensions. In 1965, he accepted an invitation from Abraham Maslow for an appointment to an endowed chair at Brandeis University, but Kelly died shortly thereafter.

Kelly was a major force in the development of the clinical psychology profession during its rapid growth following World War II. He held several honored positions in the field, including the presidencies of the Clinical and Consulting divisions of the American Psychological Association and the American Board of Examiners in Professional Psychology.

Personal Construct Theory

Kelly suggested that people perceive and organize their world of experiences the same way scientists do, by formulating hypotheses about the physical and social environment and testing them against the reality of daily life. In other words, we observe the events of our life—the facts or data of our experience—and interpret them in our own way. This personal interpreting, explaining, or construing of experience is our unique view of events (Winter & Proctor, 2014). It is the pattern within which we place them. Kelly said that we look at the world through "transparent patterns that fit over the realities of which the world is composed" (Kelly, 1955, pp. 8–9).

Every person has a unique framework by which they organize their world. As a result, several people can look at the same scene and perceive it differently. So it is with the hypotheses or patterns we construct to make sense of our world. This unique framework that an individual uses to organize, analyze, and understand their world is what Kelly called the *construct system.*

Pause for Reflection

Do you think that Kelly's theory applies to everyone?

Life Is a Construct

A **construct** is a person's unique way of looking at life, an intellectual hypothesis devised to explain or interpret events. We behave in accordance with the expectation that our constructs will predict and explain the reality of our world. Like scientists, we constantly test these hypotheses. We base our behavior on our constructs, and we evaluate the effects. We apply constructs to ourselves in thinking about our own personalities and identities. We also apply constructs to others to help us understand their personalities and predict their behavior. Thus, we can apply personal constructs to ourselves and others.

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Kelly argued that all people are like scientists in that they hypothesize about other people and the world, test those hypotheses, and update them in the form of constructs.

Constructive Alternativism: Adapting to the World

Over the course of our lives, we develop many constructs, one for almost every type of person or situation we encounter. We expand our inventory of constructs as we meet new people and face new situations. Further, we may alter or discard constructs periodically as situations change. Revising our constructs is a necessary and continuous process; we must always have an alternative construct to apply to a situation.

If our constructs were inflexible and incapable of being revised (which is what would happen if personality was totally determined by childhood influences), then we would not be able to cope with new situations. Kelly called this adaptability **constructive alternativism** to express the idea that we are not permanently contrained by our constructs but are free to revise or replace them with other alternatives.

construct An intellectual hypothesis that we devise and use to interpret or explain life events.

constructive alternativism The idea that we are free to revise or replace our constructs with alternatives as needed.

Ways of Anticipating Life Events

Kelly's personal construct theory is presented in a scientific format, organized into a fundamental postulate and 11 corollaries, or propositions (refer to Table 11.1). The fundamental postulate states that *our psychological processes are directed by the ways in which we anticipate events.*

By using the word *processes*, Kelly was suggesting that personality was a continually flowing, moving process. Our psychological processes are directed by our constructs, by the way each of us construes our world. Another key word in the fundamental postulate is *anticipate.* Kelly's notion of constructs is anticipatory: We use constructs to predict the future so that we have some idea of the consequences of our actions, of what is likely to occur if we behave in a certain way, as well as what to expect from other people.

Pause for Reflection

Why do you think it is essential for people to be able to predict what others will do?

The Construction Corollary

Similarities Among Repeated Events Kelly believed no life event or experience could be reproduced exactly as it occurred the first time. An event can be repeated, but it will not be experienced in precisely the same way. However, recurrent features or themes will emerge. Some aspects of a situation will be similar to those experienced earlier. It is on the basis of these similarities that we are able to predict or establish anticipations about how we will deal with that type of event in the future. Our predictions rest on the idea that future events, though they are not exact duplicates of past events, will nevertheless be similar. As an example, people tend to apply more personal constructs to people of the same gender as themselves, assuming they can predict more about them (Adams-Webber, 2001).

The Individuality Corollary

Individual Differences in Interpreting Events With this corollary, Kelly introduced the notion of individual differences. He pointed out that people differ from one another in how they perceive or interpret an event, and because people construe events differently, they thus form different constructs. Our constructs do not so much reflect the objective reality of an event as they constitute the unique interpretation each of us places on it. This is core to understanding how differences in constructs give rise to differences in personality. As we will discuss further on in this chapter, much research supports this corollary (e.g., Feixas et al., 2002; Grice, 2002, 2004; Paszkowska-Rogacz & Kabzinska, 2012).

The Organization Corollary

Relationships Among Constructs We organize individual constructs into a pattern according to our view of their interrelationships, their similarities and differences. People who hold similar constructs may still differ from one another if they organize those constructs in different patterns. Indeed, these different patterns can be analyzed by assessing asymmetric statistical relations among different personal constructs (Bell, 2004).

Typically, we organize our constructs into a hierarchy, with some constructs subordinate to others. A construct can include one or more subordinate constructs. For example, the construct *good* may include among its subordinates the constructs *intelligent* and *moral.* Thus, if we meet someone who fits our idea of a good person, we anticipate that they will also have the attributes of intelligence and high moral standards.

The relationships among constructs are usually more enduring than the specific constructs themselves, but they, too, are open to change. A person who feels insulted by someone who appears more intelligent may switch the construct *intelligent* from a subordinate place under the construct *good* to a place under the construct *bad.* The only valid test for a construct system is its predictive value. If the organization of our constructs no longer provides a useful way to predict events, we will modify it.

The Dichotomy Corollary

Two Mutually Exclusive Alternatives All constructs are bipolar or dichotomous. This is necessary if we are to anticipate future events correctly. Just as we note similarities among people or events, we must also account for dissimilarities. For example, it is not enough to have a construct about a friend that describes the personal characteristic of *honesty.* We must also consider the opposite, *dishonesty,* to explain how an honest person differs from someone who is not honest.

If we did not make this distinction—if we assumed that all people are honest—then forming a construct about honesty would not help us anticipate or predict

Table 11.1 Corollaries of personal construct theory

Construction	Because repeated events are similar, we can predict or anticipate how we will experience such an event in the future.
Individuality	People perceive events in different ways.
Organization	We arrange our constructs in patterns, both according to our view of their similarities and differences and hierarchically.
Dichotomy	Constructs are bipolar; for example, if we have an opinion about honesty, that idea must also include the concept of dishonesty.
Choice	We choose the alternative for each construct that works best for us, the one that allows us to predict the outcome of anticipated events.
Range	Our constructs may apply to many situations or people, or they may be limited to a single person or situation.
Experience	We continually test our constructs against life's experiences to make sure they remain useful. Our constructs change as we develop and have new experiences.
Modulation	We may modify permeable constructs as a function of new experiences.
Fragmentation	We may sometimes have contradictory or inconsistent subordinate constructs within our overall construct system.
Commonality	Although our individual constructs are unique to us, people in social groups or cultures may hold similar constructs.
Sociality	We try to understand other people's personalities and predict what they will do, and we modify our personality and behavior accordingly.

anything about people we might meet in the future. A person can be expected to be honest only in contrast to someone who is expected to be dishonest. The appropriate personal construct in this example, then, is *honest versus dishonest.* Our constructs must always be framed in terms of a pair of mutually exclusive alternatives.

The Choice Corollary

Freedom of Choice The notion that people have freedom of choice is found throughout Kelly's writings. According to the dichotomy corollary described previously, each construct has two opposing poles. For every situation we must choose the alternative that works best for us, whether choosing between two poles of the construct or between different constructs to help us predict how another person will behave or how a situation will unfold. Kelly suggested that we have some latitude in deciding between the alternatives, and he described it as a choice between security and adventure. Kelly believed we face such choices throughout our lives, choices between defining or extending our personal construct system. That is, sometimes we already have the constructs in place to accurately predict the behavior of someone or some situation, which we can then choose to pursue—security. The secure choice, which is similar to past choices, further defines and limits our construct system by repeating experiences and events. The popular tendency to opt for the secure, low-risk alternative may explain why some people persist in behaving in an unrewarding way. For example, why do some people act aggressively toward others even when they are continually rebuffed? Kelly's answer was that they are making the low-risk choice because they have come to know what to expect from others in response to aggressive behavior. Perhaps people who engage hostilely with other people do not know how others will react to friendliness because they have rarely tried it or they expect to be taken advantage of.

Alternatively, we may not yet have a construct, have a less fleshed-out one, or have a less clear and positive construct; using that one to predict the future entails taking a risk—adventure. Kelly argued that with adventure, although the risk is higher, the potential reward and satisfaction are greater. The more adventurous choice extends our construct system by encompassing new experiences and events. The person who behaves aggressively could take the risky strategy of working

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Part of forming our constructs is making the choice between security or risk in how we apply them and update them through experience.

to be more friendly, which may reap greater social rewards though the results are at some point uncertain.

Remember that our choices are made in terms of how well they allow us to anticipate or predict events, not necessarily in terms of what is best for us. And it is Kelly's contention that each of us, in the best scientific tradition, desires to predict the future with the highest possible degree of certainty.

The Range Corollary

The Range of Convenience Few personal constructs are appropriate or relevant for all situations. Consider the construct *tall versus short*, which obviously has a limited **range of convenience** or applicability. It can be useful with respect to buildings, trees, or basketball players, but it is of no value in describing good food, weather, friends, or professors.

Some constructs can be applied to many situations or people, whereas others are more limited, perhaps appropriate for one person or situation. The range of convenience or relevance for a construct is a matter of personal choice. For example, we may believe that the construct *loyal versus disloyal* applies to everyone we meet or only to our family members or to our pet dog. According to Kelly, if we are to understand personality fully, it is just as important to know what is excluded from a construct's range of convenience as it is to know what is included.

range of convenience The spectrum of people and situations to which a construct can be applied. Some constructs have limited applicability; other constructs are broader.

permeability The idea that constructs can be revised and extended in light of new experiences.

The Experience Corollary

Exposure to New Experiences We have seen that each construct is a hypothesis generated on the basis of past experience to predict or anticipate future events. Each construct is then tested against reality by determining how well it predicts a given event. Most of us are exposed to new experiences daily, so the process of testing the fit of a construct to see how well it predicted the event is ongoing. If a construct is not a valid predictor of the outcome of the situation, then it must be reformulated or replaced.

As a result, we evaluate and reinterpret our constructs as our environment changes. Constructs that worked for us at age 16 may be useless, or even harmful, at age 40. In the intervening years, our experiences will have led us to revise our construct system. If you never have any new experiences, then your construct system would never have to change. But for most of us, life involves meeting new people and coping with new challenges. Therefore, we must re-construe our experiences and constructs accordingly. This is personality growth.

The Modulation Corollary

Adapting to New Experiences Constructs differ in their **permeability**. To permeate means to pass through and fill the space in something. A permeable construct is one that allows new elements to be admitted to the range of convenience. Such a construct is open to new events and experiences and is capable of being revised or extended by them.

The Fragmentation Corollary

Competition Among Constructs Kelly believed that within our construct system, some constructs might be incompatible even though they coexist within the overall pattern. Recall that our construct system may change as we evaluate new experiences. However, new constructs do not necessarily derive from old ones. A new construct may be compatible or consistent with an old one in a given situation, but if the situation changes, these constructs can become inconsistent. Consider that a friend (vs. competitor) of yours becomes a competitor (vs. friend) if you were to compete against them in intramural soccer, trivia, or a board game. Overall, the constructs related to specific situations of competition are subordinate to the more general friend construct. According to Kelly, this is the process by which we tolerate subordinate inconsistencies without damaging our overall construct system.

Research with clinical and nonclinical samples has demonstrated that people indeed experience conflicts among their constructs, and more numerous conflicts are associated with more mental health challenges and more severe symptoms (Feixas et al., 2009).

The Commonality Corollary

Similarities Among People in Interpreting Events Because people differ in the ways they construe events, each person develops unique constructs. However, people also demonstrate similarities in their ways of construing events. Kelly suggested that if several people construe an experience similarly, we can conclude that their cognitive processes are similar.

Consider a group of people with the same cultural norms and ideals. Their anticipations and expectations of one another will have much in common, and they will construe many of their experiences in the same way as compared to people from different cultures, in which different constructs are more salient or important. People from the same culture may resemble each other in their behaviors and characteristics even though they are exposed to different individual life events. Similarly, people's cognitive constructs are similar to those of their romantic partners, as evidenced by research done with couples who lived together in Canada (Adams-Webber, 2001).

The Sociality Corollary

Interpersonal Relationships As already noted, people in the same culture tend to construe events similarly. Although this accounts for some commonalities among people, it does not in itself bring about positive social relationships. It is not enough for one person to construe or interpret experiences in the same way as another person. The first person must also construe the other person's constructs. In other words, we must understand how another person applies constructs, and therefore their personality, if we are to anticipate how that person will predict events.

Construing another person's constructs is something we do routinely. Each person assumes a role with respect to others. We play one role with a partner, another with a child, another with our supervisor at work. Each role is a behavior pattern that develops from understanding how the other person construes events. In a sense, then, we fit ourselves into the other person's constructs.

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Kelly's commonality corollary suggests that there will be similarities in how people use constructs, especially close others such as friends and romantic partners.

Pause for Reflection

Which 3 of the 11 corollaries do you think are most important to the constructs you use to understand the world?

The Role Construct Repertory Test

Kelly devised the Role Construct Repertory (REP) Test to capture the constructs we apply to others, namely, to important people in our lives. Respondents are asked to list by name the people who have played a significant role in their lives, such as mother, father, romantic partner, closest friend, and the most intelligent or interesting person they know (refer to Table 11.2).

The names are sorted, three at a time, and people are asked to select from each group of three the two people who are most alike, noting how they differ from the third. For example, a person may be given the names of the most threatening person, successful person, and attractive person and must describe how any two of them are similar and how they differ from the other.

The Repertory Grid

This information is presented in a diagram called a repertory grid. For each row, the person judges the three people indicated by circles and formulates a construct about them, such as *happy versus sad.* The person writes a word or phrase that describes two of them in the column labeled *Emergent Pole.* The person writes the opposite word (*sad*) to describe the third

Table 11.2 Role title list from the Role Construct Repertory Test

1.	A teacher you liked
2.	A teacher you disliked
3.	Your wife/husband or present boyfriend/girlfriend
4.	An employer, supervisor, or officer under whom you worked or served and whom you found hard to get along with
5.	An employer, supervisor, or officer under whom you worked or served and whom you liked
6.	Your mother or the person who has played the part of a mother in your life
7.	Your father or the person who has played the part of a father in your life
8.	Your brother nearest your age or the person who has been most like a brother
9.	Your sister nearest your age or the person who has been most like a sister
10.	A person with whom you have worked who was easy to get along with
11.	A person with whom you have worked who was hard to understand
12.	A neighbor with whom you get along well
13.	A neighbor whom you find hard to understand
14.	A boy you got along well with when you were in high school
15.	A girl you got along well with when you were in high school
16.	A boy you did not like when you were in high school
17.	A girl you did not like when you were in high school
18.	A person of your own sex whom you would enjoy having as a companion on a trip
19.	A person of your own sex whom you would dislike having as a companion on a trip
20.	A person with whom you have been closely associated recently who appears to dislike you
21.	The person whom you would most like to be of help to or whom you feel most sorry for
22.	The most intelligent person whom you know personally
23.	The most successful person whom you know personally
24.	The most interesting person whom you know personally

Source: Reprinted from *The Psychology of Personal Constructs*, by George A. Kelly. Copyright © 1991 by Routledge, Chapman & Hall, Inc. Reproduced by permission of Taylor & Francis Books UK.

person in the group in the column labeled *Implicit Pole*. The person then places a check mark in the squares of anyone else in the grid who shares the emergent pole characteristics—anyone significant in the person's life who could be described as happy. Refer to Figure 11.1.

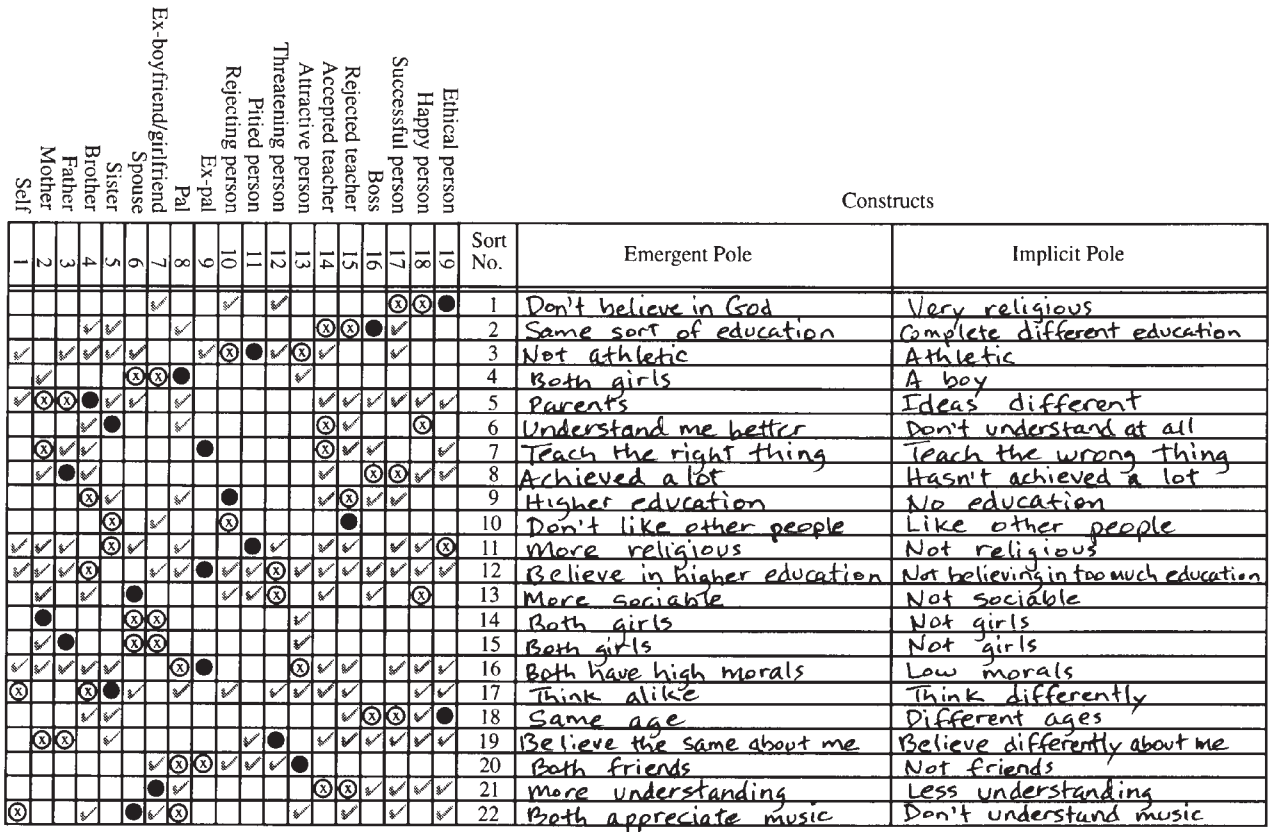
The Role of Dichotomies

The assumption underlying the REP Test is that people construe events in dichotomies, according to the dichotomy corollary, in terms of like versus unlike or similar versus dissimilar. By forcing people to make repeated judgments about their social relationships, Kelly believed he could uncover their anticipations and expectations. The dichotomies or alternatives by which we guide our life will characterize the pattern of our personal constructs—or personality.

Interpreting the REP Test Interpretation of the REP Test depends on the skill and training of the psychologist/researcher who administers it. Kelly did not intend the test to be a standardized, objective self-report inventory. He designed it as a way to assess constructs as a necessary stage in psychotherapy, to induce clients to reveal the constructs by which they organize their world. However, computer programs have since been developed to analyze individual repertory grids in more objective terms (Grice, 2002).

Figure 11.1

Sample Repertory Grid



Sort No.	Emergent Pole	Implicit Pole
1	Don't believe in God	Very religious
2	Same sort of education	Complete different education
3	Not Athletic	Athletic
4	Both girls	A boy
5	Parents	Ideas different
6	Understand me better	Don't understand at all
7	Teach the right thing	Teach the wrong thing
8	Achieved a lot	Hasn't achieved a lot
9	Higher education	No education
10	Don't like other people	Like other people
11	More religious	Not religious
12	Believe in higher education	Not believing in too much education
13	More sociable	Not sociable
14	Both girls	Not girls
15	Both girls	Not girls
16	Both have high morals	Low morals
17	Think alike	Think differently
18	Same age	Different ages
19	Believe the same about me	Believe differently about me
20	Both friends	Not friends
21	More understanding	Less understanding
22	Both appreciate music	Don't understand music

Source: Reprinted from *The Psychology of Personal Constructs*, by George A. Kelly. Copyright © 1991 by Routledge, Chapman & Hall, Inc. Reproduced by permission of Taylor & Francis Books UK.

Research Findings with the REP

The REP is a flexible measure that has been applied to many contexts given that people use personal constructs to understand others and shape their own behavior. In the early 2000s, some researchers developed a way to analyze the content of the REP that has become widely used (Feixas et al., 2002). The broader categories or kinds of constructs include:

- Moral
- Emotional
- Relational
- Personal
- Intellectual
- Values and interests
- Existential
- Concrete

Moral includes, for example, the Good–Bad and Just–Unjust constructs. Relational includes constructs such as Extroverted–Introverted and Peaceable–Aggressive. Values and interests include constructs of, for example, Conservative–Liberal and Athletic–Bookish. The full construct taxonomy can be found in Table 11.3. Of course, because the REP provides the flexibility for people to provide their own constructs in their own words, these constructs are not exhaustive; rather they are illustrative. Indeed, some work suggests that more unique personality information can be captured with measures from the personal construct framework than from the Big Five framework (e.g., Grice, 2004).

Applications of the REP

The REP Test has been used in market research to assess the criteria consumers use to evaluate products. Industrial-organizational psychologists have used the

Table 11.3 Personal Construct Categories, Definitions, and Examples

Construct category	Definition	Example
Moral	Constructs concerning the moral value of the element, e.g., their kindness, generosity and fairness	Good–bad Altruist–egoist Humble–proud Respectful–judgmental Faithful–unfaithful Sincere–insincere Just–unjust Responsible–irresponsible
Emotional	Constructs concerning the degree of emotionality or sexuality of the element described, to his or her emotional attitude toward life or with regard to certain specific feelings	Visceral–rational Warm–cold Optimist–pessimist Balanced–unbalanced Happy–sad Satisfied–unsatisfied Sexual–frigid
Relational	Constructs concerning all of those aspects that describe types of relationship with others	Extroverted–introverted Pleasant–unpleasant Direct–devious Tolerant–authoritarian Conformist–rebel Dependent–independent Peaceable–aggressive Sympathetic–unsympathetic Trusting–suspicious
Personal	Constructs concerning a variety of characteristics traditionally pertaining to the area of personality, character or way of being. It excludes those traits typically thought of as moral, relational or emotional, since these have been included in previous areas	Strong–weak Active–passive Hardworking–lazy Organized–disorganized Decisive–indecisive Flexible–rigid Thoughtful–shallow Mature–immature Self-acceptance–self-criticism
Intellectual /operational	Constructs concerning skills, abilities and knowledge both at the intellectual and operational levels	Capable–incapable Intelligent–dull Cultured–uncultured Focused–unfocused Creative–not creative
Values and interests	Constructs concerning ideological, religious, or distinct values as well as diverse interests and hobbies	Conservative–liberal Traditional–progressive Idealist–materialist Spendthrift–spends money Athletic–bookish
Existential	Constructs concerning central existential projects or appraisals, often of the respondent's own core sense of self or life, bearing on issues of purpose, meaning or ultimate direction	Purposeful–purposeless Growth–stagnation Fulfilment–emptiness
Concrete	Constructs concerning concrete, as opposed to abstract, features or positions of people, as well as their actions	Attractive–ugly Male–female Has family–is single Rich–poor Talks quickly–talks slowly Has much time–has little time

Source: Feixas, G., Geldschläger, H., & Neimeyer, R. A. (2002). Content analysis of personal constructs. *Journal of Constructivist Psychology, 15*(1), 1–19, as represented in Hill, K., Wittkowski, A., Hodgkinson, E., Bell, R., & Hare, D. J. (2016). Using the repertory grid technique to examine trainee clinical psychologists' construal of their personal and professional development. *Clinical Psychology & Psychotherapy, 23*(5), 425–437.

REP Test for vocational counseling, employee selection, evaluation of performance on the job, and evaluation of training programs (Benjafield, 2008). Research in Poland suggests that the REP test and Kelly's personal construct theory can facilitate vocational guidance (Paszkowska-Rogacz & Kabzinska, 2012).

The REP Test has been adapted to measure clinical psychology graduate students' personal and professional development, for example, in the United Kingdom (Hill et al., 2016). Table 11.4 has the elements used in this measure, which, like most REPs, asks participants, 'Which of these two are the same in some way, and different from the third?' and then asks them to rate each element on the poles of the descriptors.

The researchers found that the constructs the students used were highly emotional and suggested they were experiencing high levels of anxiety (Anxious–Confident) and worry (Worried–Carefree) and lacked a work–life balance. Refer to Figure 11.2 for the constructs they found in comparing the actual self with the ideal self. The analysis of differences among selected pairs revealed a discrepancy between actual and ideal selves, interpreted as lowered self-esteem. But the analysis also showed that the students tended to have consistencies in their identities, that is, in their past, present, and future professional selves.

Table 11.4 Elements Used in Assessment of Clinical Psychology Graduate Students' Personal and Professional Development: Example

Element 1	Actual (current) self
Element 2	Self before starting the programme
Element 3	Self after completing the programme
Element 4	Ideal self
Element 5	Actual (current) professional self
Element 6	Professional self before starting the programme
Element 7	Professional self as a qualified clinical psychologist
Element 8	A clinical psychologist who qualified recently (actual [anonymous] person)
Element 9	A clinical psychologist who qualified more than 5 years ago (actual [anonymous] person)
Element 10	Ideal clinical psychologist

Source: Hill, K., Wittkowski, A., Hodgkinson, E., Bell, R., & Hare, D. J. (2016). Using the repertory grid technique to examine trainee clinical psychologists' construal of their personal and professional development. *Clinical Psychology & Psychotherapy, 23*(5), 425–437.

Pause for Reflection

Think about or write down your answers to the repertory grid questions. What constructs emerge?

Dangerous Behavior

There has also been some research on how personal constructs are related to dangerous behaviors. A study in Australia found that the degree of automobile drivers' reckless behavior on the road was related to the constructs they held (McNally & Bradley, 2014).

Another study by British psychologists on the personal constructs used by convicted terrorists in India found that those who were unable to re-construe their future lives in ways not linked to terrorism were the least likely to disengage themselves from future terrorist acts (Canter et al., 2014).

Mental Health and Psychopathology

The REP has been used to examine psychological well-being versus distress by assessing the constructs people use. For example, among a group of student nurses, those identified as highly anxious tended to use *Anxious–Non-Anxious* as a construct for evaluating others. Those who were judged by peers as friendly tended to perceive others in terms of a *Friendly–Unfriendly* construct (Sechrest, 1968).

The REP Test has been used to study people with schizophrenia, anxiety, depression, and those with brain damage. Compared with a non–clinical sample, people with schizophrenia had unstable and inconsistent personal constructs for other people. However, their construing of objects was stable and consistent, suggesting that their thought disorders applied only to social situations. Their thought processes were also characterized by paranoid delusions and irrational links between constructs (e.g., Bannister et al., 1971; Bannister & Salmon, 1966; Winter, 1992). More recently, researchers have found that people with schizophrenia-spectrum disorders who score higher in self-discrepancies on the REP display higher positive symptoms (i.e., an excess or distortion of healthy functioning, such as delusions or hallucinations or disorganized behavior), and this link can be accounted for by depressive symptoms (García-Mieres et al., 2020). They further found that the complexity of interpersonal constructs was related to self-reflectivity and neurocognitive deficits in negative symptoms. In a systematic review of 15 research

Figure 11.2

Constructs from REP Study of Clinical Psychology Graduate Students' Personal and Professional Development: Example

Element pair 1: 'Actual self–ideal self'
Concrete: 'Actual self' construed as close to the non-preferred pole, 'Ideal self' construed closer to preferred pole

- 'Insecure social and financial circumstances–Secure social and financial circumstances'
- 'Has control over how they spend their time–Has no control over how they spend their time'
- 'In transition–Settled'
- 'Uncertain circumstances–Certain circumstances'

Emotional: 'Actual self' construed as close to the non-preferred pole, 'Ideal self' construed as close to the preferred pole

- 'Anxious–Confident'
- 'Worries, ruminates, overthinks and has no control–Does not worry, ruminate, overthink and has no control over it'
- 'Struggles with anxiety–Can tolerate anxiety'
- 'Flat–Bubbly'
- 'Worried–Carefree'
- 'Tired, worn down–Enthusiastic'

Element pair 3: 'Self before starting the programme'–'Actual Self'
Existential: 'Self before starting the programme' construed closer to the non-preferred pole, 'Actual self' construed closer to the preferred pole

- 'Feels lost–Contained, whole person'
- 'Compartmentalized person–Whole person'
- 'Has a clear path in life–Lost and does not know where to find the path'
- 'Clear direction–Seeking direction'

Emotional: 'Self before starting the programme' construed closer to the preferred pole, 'Actual self' construed closer to non-preferred pole

- 'Optimistic–Cynical'
- 'Tired, worn down–Enthusiastic'
- 'Depressed and insecure–Happy and content'
- 'Worried–Carefree'
- 'Agitated–Relaxed'
- 'Unenthusiastic–Passionate'

Element pair 5: 'Actual self–Self after completing the course'
Emotional: 'Actual self' construed closer to the non-preferred pole, 'Self after completing the course' construed closer to the preferred pole

- 'Tired, worn down–Enthusiastic'
- 'Boring, miserable, never go out–Happy, fun-loving, bubbly'
- 'Overwhelmed with stress–Not stressed'
- 'Stressed–Calm'

Concrete: 'Actual self' construed closer to the non-preferred pole, 'Self after completing the course' construed closer to preferred pole

- 'Has control over how they spend their time–No control over how they spend their time'
- 'In transition–Settled'
- 'Weighed down–Free'
- 'No social life–Work–life balance'

Source: Hill, K., Wittkowski, A., Hodgkinson, E., Bell, R., & Hare, D. J. (2016). Using the repertory grid technique to examine trainee clinical psychologists' construal of their personal and professional development. *Clinical Psychology & Psychotherapy, 23*(5), 425–437.

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Cognitive complexity entails applying diverse constructs to other people, representing them with more numerous, distinguishing constructs.

studies on personal constructs and psychosis, scholars found that patients with psychotic symptoms tended to report high discrepancies between their actual and ideal selves and between their self and close others (García-Mieres et al., 2019).

Other work using the REP has found that patients diagnosed with major depressive disorder (MDD) experience larger discrepancies between actual and ideal self, between self and others, and between others and ideal, which indicate lower self-esteem, stronger feelings of social isolation, and more negative perceptions of others, respectively (Feixas et al., 2021).

A study using a modified version of the REP Test compared the personal construct systems of repeat patients in psychiatric hospitals with those hospitalized for the first time. The repeat patients construed their social network as small, limited to a few people on whom they believed they could depend. First-time patients construed their social network as significantly larger (Smith et al., 1991).

One study in Spain found that women diagnosed with bulimia nervosa applied constructs related to the body instead of personal constructs to understand their world as compared to a control group (Dada et al., 2017). Furthermore, the women with bulimia tended to have alignment in their actual and ideal self when it came to moral or values/interests constructs, but there were discrepant constructs when it came to the personal and physical. The REP approach has also been used to understand the role of anger in British adolescents serving time for convictions (Yorke & Dallos, 2015).

Similarity to Close Others

Research suggests that we are similar to close others in our personal constructs, as tends to be found with other measures of personality. Early research found that college students make friends with others who are similar (Duck & Spencer, 1972). Specifically, individuals took the REP Test during their first week at college and again six months later. The results suggest that the similarity in constructs among friends did not develop during the six-month period but had existed before the relationships were formed.

Married people whose spouses were similar to their own patterns of personal constructs reported greater happiness with their marriage than did couples whose constructs were more dissimilar (Neimeyer, 1984). More recent research conceptually replicates this: A study of 40 American couples found that although the women scored significantly higher in cognitive complexity than the men did, there was a high positive correlation in cognitive complexity between men and women who were partners (Adams-Webber, 2001).

Pause for Reflection

Do you think you're similar to your close others in terms of constructs used to understand yourself and others around you?

Cognitive Complexity

An outgrowth of Kelly's work on personal constructs relates to cognitive styles, that is, differences in how we perceive or construe the persons, objects, and situations in our environment. Research on cognitive styles was derived from the REP Test and focuses on the concept of **cognitive complexity**.

cognitive complexity A cognitive style or way of construing the environment characterized by the ability to perceive differences among people.

Cognitive complexity is defined as the ability to discriminate in the process of applying personal constructs to other people. People high in cognitive complexity are able to appreciate variation among people's personalities and can easily place a person in many categories.

The other extreme, **cognitive simplicity**, refers to being less capable of perceiving differences when judging other people. People high in cognitive simplicity are likely to place others in only one or two categories, unable to observe much personality variation.

In Kelly's theory, cognitive complexity is the more desirable and useful cognitive style. Our goal in developing a construct system is to reduce uncertainty by being able to predict or anticipate what people will do. This gives us a guide for our own behavior. People with a more complex cognitive style are more likely to be successful at this task than people with a simpler cognitive style. Therefore, cognitive style is an important dimension of personality.

Research has found personality and individual differences in terms of cognitive style. Some work has found that people high in cognitive complexity are higher in openness to experience, extraversion, and conscientiousness, and they engage in more organizational citizenship behavior (Da'as et al., 2020).

In a meta-analytic review of cognitive complexity, researchers found that cognitive complexity was associated with cognitive ability (Woznyj et al., 2020). This higher cognitive ability plays a role in various contexts. For example, people with higher cognitive complexity are more likely to believe facts when they are presented in the context of opposing arguments versus when presented one-sided, as evidenced in two studies in Australia (Chen & Unsworth, 2019).

People high in cognitive complexity are better able to make predictions about other people's behavior. People high in cognitive complexity more readily recognize differences between themselves and others, display more empathy toward others, and deal better with inconsistent information in construing others than do people high in cognitive simplicity (Crockett, 1982). The more cognitively complex people are, the more distance between their interpersonal self roles, indicating social complexity (Churchyard et al., 2013).

cognitive simplicity A cognitive style or way of construing the environment characterized by a relative inability to perceive differences among people.

Studies of college students in the United States and Canada have found that those high in cognitive complexity are lower in anxiety and instability, adjust better to the stresses of college life, and tend to possess more than the traditional five factors of personality. People with lower cognitive complexity display fewer than the five factors, suggesting that they have less complex personality profiles (Bowler et al., 2009, 2012).

Studies of politicians in the United States and England found that conservatives were high in cognitive simplicity, whereas moderates and liberals displayed higher levels of cognitive complexity (Tetlock, 1983, 1984).

Cognitive complexity may grow with more experience thinking about other people's traits. Mental health counselors and therapists with more training and experience demonstrated greater cognitive complexity than those with less training and fewer years of experience (Granello, 2010; Owen & Lindley, 2010).

Interestingly, some work suggests that when it comes to moral decision making, a middling level of cognitive complexity facilitates consideration of the well-being of others and other-focused moral decision making more than very high or very low levels (Moore & Tenbrunsel, 2014).

Another study focused on individuals with dissociative identity disorder (DID, which is characterized by an individual's experience of two or more distinct identities that direct the individual's behavior) in Norway (Dale et al., 2010). The authors first thought that people with DID might have higher cognitive complexity, but their data actually suggest the opposite: compared to a control group, those with DID have lower cognitive complexity, as assessed with the REP. People diagnosed with MDD also display less cognitive complexity insofar as their personal constructs are less rich and nuanced than controls without clinical diagnoses (Feixas et al., 2021).

Attributional Complexity

A variant of cognitive complexity is *attributional complexity*, which is defined as the extent to which people prefer complex rather than simple explanations for social behavior. In other words, they attribute the behavior of other people to complicated, multifaceted, and more sophisticated causes.

Attributional complexity has been linked to core aspects of empathy—both cognitive perspective taking and emotional concern for others (Joireman, 2004). It is unsurprising then that young teens with higher levels of attributional complexity also tend to be high in

social competence (i.e., social, emotional, and cognitive skills and behaviors that facilitate healthy interpersonal relationships and well-being), as evidenced by research in Pakistan (Sultan & Hagger, 2014).

Similarly, research with Americans found that people who measure high in attributional complexity tend to be more sensitive to and perceptive of subtle signs of racism. They also feel greater empathy toward and greater understanding of other people (Foels & Reid, 2010; Reid & Foels, 2010). Attributional complexity was also associated with less prejudice, more interracial interpersonal contact, and political liberalism (Reid & Foels, 2010). Other findings suggest that business leaders high in attributional complexity are more effective in their management behavior than those low in attributional complexity (Sun & Anderson, 2012).

Pause for Reflection

What is the link between personal constructs and cognitive complexity? Why do you think cognitive complexity is associated with adaptive personality traits, well-being, and empathy?

Diversity, Personal Constructs, and Cognitive Complexity

Taking a personal construct theoretical perspective, early work found that people's variation in the extent to which they perceive themselves as gender stereotypical or gender stereotype atypical was associated with variation in their personal constructs (Balz, 1996). Research has also found that the REP can capture complex feelings associated with disadvantage or societal discrimination against people from marginalized groups or with minoritized identities. For example, research with Americans who identify as lesbian or gay found that some people experience internalized guilt or threat as assessed with the REP, and those feelings are associated with internalized prejudice and identity stresses (Moradi et al., 2009). Other research in Pakistan has applied the REP to understand how children who have run away from home or were abandoned view close others as compared to children who still live at home with their families (Ijaz et al., 2019). Children who ran away from their homes considered their fathers more rejecting and unloving and viewed their friends more positive than the other groups of children. However, all children with disadvantaged backgrounds displayed confused self-concepts.

Another example of the application of personal constructs is to understand people's view of Whiteness. Researchers in Australia analyzed interviews of mental health practitioners using personal construct theory for the constructs of White–Non-White and suggest that a shift toward identifying the role of inequity and inequality experienced by diverse individuals who may seek therapy (Dune et al., 2022).

One study examined intercultural perceptions using personal construct analyses (Burr et al., 2014). Specifically, researchers studied how people from the United Kingdom perceived the national character of Italy and how people from Italy perceived the national character of the United Kingdom, finding that these perceptions of people from outside the culture tended to align with perceptions of members of the culture. For example, people from both groups perceived Italian culture and people as valuing family and hospitality, and both groups perceived English culture and people as valuing their own and other's privacy and self-control.

Research suggests that multiculturalism in various forms facilitates cognitive complexity. One example comes from research with White Americans and bicultural Chinese American college students who were born in China and lived at least five years in the United States. Researchers found that the bicultural students scored higher in cognitive complexity than the monocultural students (Benet-Martinez et al., 2006). Similar findings have emerged with *integrative complexity*, when information processing involves consideration and combination of multiple perspectives. For example, Asian American college students and Israelis working in the United States who strongly identified with two or more cultures displayed more integrative complexity in both cultural and work contexts (Tadmor et al., 2009). For both American and European MBA students who studied abroad, those

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Multiculturalism is associated with cognitive complexity.

that identified more strongly with both their home and host cultures engaged in tasks with higher integrative complexity and were more successful at work (i.e., higher promotion rates) (Tadmor et al., 2012). The effect of multiculturalism on integrative complexity is not short-lived, either; researchers observe this change over 10 months of the MBA context (Maddux et al., 2014).

Stability and Change of Constructs over Time

Studies measuring people's personal constructs and cognitive complexity find relative stability in personality over time. Both over a short period of time and in different contexts (i.e., in mathematics and in athletics), American college students' personal constructs and self-concept were positively correlated (Grice et al., 2004). As we have discussed in other chapters, there is also a maturity effect. Early research found that although people's role models change over time, the most important constructs to an individual tend to stay the same, but also that patterns become increasingly complex over the life span (Crockett, 1982). It makes sense that as cognitive capacities grow more complex over the life span, the complexity of personal constructs does as well. Early research suggests that childhood experience likely shapes cognitive complexity, with adults high in cognitive complexity having more diverse experiences in childhood and parents that supported their autonomy, compared with adults low in cognitive complexity (Sechrest & Jackson, 1961).

Using both the REP Test and the Role Category Questionnaire (RCQ, another measure of interpersonal construct and cognitive complexity; Crockett, 1965), researchers found that children change in level of cognitive complexity over time from grades 7 to 11 in a Chinese sample (Zhang et al., 2012). In a study of American adolescents, young adults, adults, middle-aged adults, older adults, and elderly adults, researchers focused on cognitive complexity operationalized as crystallized intelligence, fluid intelligence, and reflective cognition as well as cognitive-affective integration, operationalized as integrated and defensive coping (Labouvie-Vief & Diehl, 2000). They found that the older people are and the more education they have, the more cognitive complexity they display; in turn, the people with higher cognitive complexity also engage in healthier patterns of coping.

Pause for Reflection
Which constructs do you think you've applied throughout your life?

Highlights

Research on Kelly's Ideas

Research has found that personal constructs tend to:

- Be similar to those of our close others
- Help decipher occupational fit
- Predict dangerous behavior
- Reflect mental health, including anxiety, depression, and psychotic disorders
- Remain relatively stable over time, though they mature
- Differ by cultural context

Research has found that cognitive complexity is associated with:

- Age; it increases as people mature
- More openness to experience, extraversion, and conscientiousness
- Higher cognitive ability
- Mental health and coping
- Greater empathy and understanding of others
- Sensitivity to subtle signs of racism
- Multiculturalism

Assessment in Kelly's Theory

The Interview

Kelly's primary assessment technique was the interview. As he put it, "If you don't know what is going on in a person's mind, ask him; he may tell you!" (1958, p. 330). Adopting what he called a "credulous attitude," Kelly accepted the client's words at face value, believing this was the best way to determine the person's constructs. He also recognized that a person might deliberately lie or distort the reported version of events. However, what the client said must be respected, even if not always fully believed.

Self-Characterization Sketches

Another technique used to assess a construct system is to have the person write a **self-characterization sketch**. Kelly's instructions to the client were as follows. "I want

self-characterization sketch A technique to assess a person's construct system by having them write a detailed description of themselves as if it were written by a friend.

you to write a character sketch of [client's name] just as if [they] were the principal character in a play. Write it as it might be written by a friend who knew [them] very intimately and very sympathetically, perhaps better than anyone ever really could know [them]" (1955, p. 323). Kelly found this technique useful for learning how clients perceive themselves in relation to other people.

Self-characterization sketches have been used in the context of therapy and some argue may be particularly useful for understanding an individual or family's personal constructs, especially those that they may be initially uncomfortable opening up about (Androutsopoulou, 2001). In the context of family caregiving, self-characterization sketches have been used to study caregivers' understanding of themselves. Researchers in South Africa found that caregivers perceive themselves as having moral, emotional, and cognitive attributes, such as mastery, self-efficacy, strength, and selflessness (Mahomed & Pretorius, 2022). This method has also been adapted to interpret children's personal constructs according to their drawings (Bell & Bell, 2008).

Pause for Reflection

Think about or write down your own character sketch. What are the constructs that emerge?

Fixed Role Therapy

After assessing a client's system of personal constructs, Kelly attempted to bring about a change in maladaptive constructs. He promoted a form of psychotherapy he called **fixed role therapy**. To help clients formulate new constructs and discard old ones, he asked them to write a self-characterization sketch describing themselves as the lead character in a play.

Then the therapist rewrites the play: They prepare a fixed role sketch containing constructs that differ from the client's maladaptive self-perceptions as revealed in the self-characterization sketch. The client is told that the fixed role sketch is about a fictitious character and is asked to act out that character in the therapist's office and later in everyday life. Through this role-playing, the client is expected to project personal needs and values onto the fictitious character.

The therapist expects the client to discover that the new constructs in the fixed role sketch work better in anticipating events than do the old constructs by which the client was living. Once the client realizes this, they can incorporate the new constructs into the overall construct system and function in a more satisfying and effective way.

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One of Kelly's approaches to assessment and therapy is fixed role therapy, where a client plays out more healthy constructs as if the lead character of a play.

Kelly developed fixed role therapy from observing a friend who began to live the role he was performing in a college play. The friend was so strongly influenced by the part that his behavior offstage gradually became more and more like the character. The goal of fixed role therapy, then, is to first play a role and then come to live it.

A Sample Fixed Role Therapy Based on interviews with a client named Roy Taylor, his written self-characterization sketch, and his REP Test results, Roy's therapist concluded that the client was overly concerned with finding a romantic partner. His attempts to do so were having a negative impact on his other social relationships.

The client had difficulty being open and assertive because in his construct system assertiveness and extraversion were negative personality characteristics. Yet, in dealing with other people, he was convinced that his opinions were the correct ones and that everybody else was wrong. At work, he felt isolated, believing he belonged to a higher social class than his colleagues.

The therapist's fixed role sketch for this client made no mention of the client's desire to have an intimate relationship with a woman. Instead, taking as a framework the client's skill at tennis, the therapist encouraged

fixed role therapy A psychotherapeutic technique in which the client acts out constructs appropriate for a fictitious person. This shows the client how the new constructs can be more effective than the old ones they had been using.

the client, through the fictitious character, to be more curious about and tolerant of different kinds of people and their views (Winter, 1992, pp. 270–271).

> Roy Taylor's philosophy of life very much reflects his approach to his favorite sport, tennis: It's not whether a player wins or loses that's important, but whether they've played the game to the best of their ability. Whether at work or at play, he believes that if a job is worth doing, it's worth doing well, and he brings to everything that he does a certain passion and conviction, which cannot fail to earn your respect. Although you might perhaps think that this would make him appear a little too serious and intense, once you get to know him you soon realize that his main concern is to live life to the fullest and that this includes having fun as well as working hard. Life doesn't always run smoothly for him, of course, but when he has a disappointment, he always seems able to learn something from it and to look to the future rather than brooding on his present or past misfortunes.
>
> One of his greatest strengths at tennis is his ability to anticipate the moves of the other players, be they his opponents or doubles partners. In other areas of his life, he also always tries to see the world through the eyes of the people with whom he comes into contact, perhaps because he has mixed with people from so many different walks of life. His lively curiosity in what makes other people tick is usually reciprocated and leads him, almost before he knows it, into some very rewarding relationships. He also, of course, has his fair share of disagreements with others, but when this happens, he always makes an effort to understand the other person's point of view, even though he might not accept it. Because of this, he has a reputation both for commitment to those causes that are close to his heart and tolerance of the right of others to hold different opinions.

The Role of the Therapist The therapist reviewed the fixed role sketch with the client and asked whether the character seemed like someone that the client might want to know. The client agreed to try behaving like the character in the sketch while in the therapist's office. He was asked to try acting, thinking, and talking like the character for the next two weeks. Personality changes instilled by fixed role therapy are reported to last far beyond the two-week role-playing period.

This approach has been used by therapists to support a variety of positive changes and buttress well-being. Although there is not a large body of research on the efficacy of fixed role therapy, a meta-analysis of work done before 2004 indicates that the technique has positive results (Viney, 2005). Early research found that an integration of group therapy and fixed-role therapy was helpful in treating individuals' social anxiety or phobia in the United States (Beail & Parker, 1991). Another study found that fixed role therapy helped reduce social anxiety in a small sample of clients in Japan (Abe et al., 2011). Relying on two clinical cases, one therapist has argued that there are some strengths and some weaknesses to applying this technique with criminal offenders (Horley, 2006).

Pause for Reflection

Think about or write down your own lead character narrative. What are the constructs that emerge?

Questions About Human Nature

Kelly's personality theory presents an optimistic, even flattering, image of human nature (Kelly, 1969). He perceived people as rational beings capable of forming a framework of constructs through which to understand the world. He believed we are the authors, not the victims, of our destiny.

His view endows us with free will, the ability to choose the direction our lives will take, and the ability to change when necessary by revising old constructs and forming new ones. We are not committed to a path laid down in childhood or adolescence. Our direction is clearly toward the future because we formulate constructs to predict or anticipate events.

Thus, Kelly did not accept the notion of determinism. He did not consider past events to be the determinants of our present behavior. We are not prisoners of toilet training or parental rejection, nor are we bound by biological instincts or unconscious forces. We need no push from internal drives or needs because we are motivated by an inclination to cognitively analyze and understand ourselves and the people around us.

Although Kelly did not discuss the role of heredity in personality, he noted that we are not totally determined by environmental influences. We live by constructs based on our interpretation of events. Therefore, it is the operation of our rational mental processes and not the specific events that influence the formation of personality.

Kelly did not posit an ultimate and necessary life goal, but we may infer that our goal is to establish a construct system that enables us to predict events.

On the question of uniqueness versus universality, Kelly took a moderate position. The commonality corollary states that people in the same culture develop similar constructs, whereas the individuality corollary

emphasizes the uniqueness of many of our constructs and therefore of each of our personalities.

Reflections on Kelly's Theory

Kelly developed a unique and radical personality theory that did not derive from or build on other theories. It emerged from his interpretation, his own construct system, of data provided by his clinical practice. Its originality parallels its message, that we are capable of developing the framework for our own lives.

Kelly's system has been criticized on several points. It focuses on intellectual and rational aspects of human functioning to the exclusion of emotional aspects. Kelly's image of a person rationally constructing the present and future, forming and testing hypotheses, and making predictions as the basis for behavior does not coincide with research on the role of emotions or automatic processes. Although Kelly did not deal explicitly with emotions, he recognized them as personal constructs, similar in their formation to other constructs.

We saw that Sigmund Freud's view of personality derived from his exposure to middle-class Viennese patients, mostly highly neurotic women, who presented him with a distorted, unrepresentative sample of human nature. Other theorists have been similarly criticized. Kelly's viewpoint was also unrepresentative, insofar as his early work and theory-building was based on work with midwestern American young adults in the process of defining a construct system that would help them cope with college life.

Personal construct theory continues to enjoy a large and growing base of support, although this is much broader in Europe, Canada, and Australia than in the United States. In the mid-1980s, the Centre for Personal Construct Psychology was established in England to train clinicians in Kelly's psychotherapeutic techniques and to promote applications of the theory. The *International Journal of Personal Construct Psychology* and the *Journal of Constructivist Psychology* began publication in the late 1980s, and in 1990 the first volume of the series *Advances in Personal Construct Psychology* appeared.

Kelly's work is not as popular in the United States for several reasons. First, many psychologists consider it too different from prevailing ideas. Personality psychologists typically think in terms of the familiar concepts of motivation and emotion, unconscious forces, drives, needs, and specific traits which are absent from Kelly's system. Second, Kelly published few books, articles, or case studies, devoting most of his time to clinical work and to training graduate students. The writing style of his two major books is scholarly, not intended for the public or for the therapist looking for explanations of human passions and emotions, loves and hatreds, fears and dreams. Such was not the style of Kelly or his theory.

Kelly recognized the limitations of his program and made no pretense of setting forth a finished theory. Just as an individual's constructs change in light of new experiences, Kelly expected the personal construct theory to change with further research and application. His contributions have been recognized with honors from the profession and from former students.

His theory is one of the most unusual to appear in a century of theorizing about the nature of the human personality. Adherents continue to apply it to problems in personality, clinical, industrial psychology, as well as anthropology, criminology, and urban planning (Butt, 2008; Walker & Winter, 2007).

Pause for Reflection

Are there other criticisms or strengths of Kelly's theory not covered here?

DEI Spotlight

Kelly's Theory and Diversity, Equity, and Inclusion

Kelly's theory focuses on people's using cognitive constructs about themselves and others to understand and navigate their world. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individuals, Family, and Society. Not long ago (beginning in 2011), a civil war in Syria raged, leaving many citizens of that country in need of humanitarian assistance (15.3 million people, 70% of the population), without homes, and/or being forced to leave their country to survive. Many Syrian families became refugees seeking asylum in Europe and North America, where they could find safety, comfort, and inclusion, or the opposite. Some scholars suggest that Kelly's personal construct psychology (PCP) can help

DEI Spotlight, continued

Kelly's Theory and Diversity, Equity, and Inclusion

us understand how integration and inclusion of Syrian refugees can be facilitated and why it might not be. Central to PCP, of course, is that people apply personal constructs to others in order to predict their behavior and events. The scholars (Naffi & Davidson, 2016) explain that

> a large number of citizens from host societies predict that if Syrian refugees enter their countries, they will consume the taxpayers' money, abuse all the services offered to them and impose their own culture. Consequently, they express their frustration online. Let us call this group Host Society First (HSF). HSF perceives an "if-then" relationship between the refugees' arrival and the ramifications HSF will have to endure. However, this is more than a one-to-one relationship between the arrival of refugees and the influence it will have on the HSF's lives. To predict the ramifications, HSF has to construe a variety of events, namely the refugees' cultural background, the situation that led them to flee their homes, the value they place on the opportunity they have to live in host countries, their expectations from the host countries' government and society, and their under-standing of their responsibilities towards the host society. HSF will also have to consider their previous experiences with refugees, namely the circumstances which surrounded previous in-fluxes of refugees, the ramifications they engendered, and the conflicting online discourses and interactions that attempted to explain and analyze the Syrian refugees' crisis. In a perspective that resembles Kelly's, we argue that from these events HSF will abstract a trend or a "construct" . . . (pp. 201–202)

They examined online opinions and petitions against the resettlement of Syrian refugees in Canada, finding constructs such as *Canadian identity versus Canadians first, supportive versus antagonist, refugee versus terrorist*, and *assets to the Canadian economy versus abusers of taxpayers' money*. But the scholars point out, the Syrians seeking asylum will also develop and apply constructs to the host nations and their people. Research bears out that such constructs will drive behavior of people involved:

> Kelly assumes that our processes—thoughts, feelings and behaviors—operate in a structured manner and are determined by our predictions of the future. Seen through the lens of this postulate, members of the host society who demonstrate racialized habitus and anticipate real or symbolic threats from the Syrian refugees will feel frustrated and assertively oppose their settlement. Conversely, Syrian refugees who anticipate exclusion from their Canadian counterparts might choose to avoid them, distance themselves, or worse, create a self-fulfilling prophecy by adopting a stereotypical behavior that validates unfounded mistrust expressed by the host society (Amichai-Hamburger et al., 2015). (p. 202)

Important to understanding how exactly relevant constructs operate is understanding how Kelly's corollaries apply. For example, as is consistent with the Individuality corollary, it is not the case that all host nation and Syrian citizens have the same constructs as other members of their groups; there is variation. The Organization corollary can be identified in how people's constructs are interrelated, with the scholars' analysis of online opinions and petitions suggesting that the majority of Canadians might use constructs such as *European versus Arab*, updating them after the Paris attacks with, for example, *Canadians' warmth/empathy versus Canadians first*, with superordinal constructs such as *humane versus inhumane*.

Recall that Kelly spoke about the choice between security and adventure in the context of the Choice corollary. Some people of the host nations might be overly concerned about their own safety based on problematic stereotypes of people from Syria. Alternatively, they may choose to take a risk, to prioritize the well-being of others who face the profound challenges of having to leave their home and resettle in a new place and culture. The Modulation and Experience corollaries suggest that observations and interpersonal interactions could change the host nation and Syrian individuals' views of each other, for better or for worse based on the quality and content of those experiences. Complementing the observations of the scholars applying PCP to understand this crisis, it is also

DEI Spotlight, continued

Kelly's Theory and Diversity, Equity, and Inclusion

important to note that the constructs being applied are in reference to other adults. However, almost half of the refugees are children, who are especially vulnerable to the dearth of resources and support to meet basic needs as refugees. The authors conclude:

> One might think simply that society needs to reflect and be more inclusive, or that Syrian refugees need to adapt to get integrated. However, everything we have stated points to the idea that both need to change, that change is difficult, and that the construction systems need to be revealed. Once the construction systems are revealed, the host societies and the Syrian refugees need to allow their superordinate constructs to be permeable to new elements based on new experiences in order for both parties to change and accept the other. Such disclosures might help practitioners to better intervene with regards to Syrian refugees' issues and might inform policy makers about the issues surrounding how a host society construes the potential presence of newcomers and how refugees might construe their own presence in a host society. Everything suggests that all parties have a lot of work to do on their constructs and that working on these constructs might help change how we act in the Syrian refugee crisis context. (p. 208)

Thus, George Kelly's system of personal constructs can help us understand the sorts of perceptions of individuals' selves and others operating in the context of the resettlement of Syrian refugees. The constructs that both the host nation citizens and the Syrian people apply will shape the extent and quality of resettlement and the well-being of individuals, families, and societies.

Chapter Summary

Kelly considered people as similar to scientists insofar as people construct hypotheses, test them against reality, and update them as needed to adapt. A personal construct is a unique way of looking at events in our lives to try to explain and predict the behavior of other people and future events. Personal constructs can be understood through 11 corollaries: the construction corollary, individuality corollary, organization corollary, dichotomy corollary, choice corollary, range corollary, experience corollary, modulation corollary, fragmentation corollary, commonality corollary, and sociality corollary.

Personal constructs are dichotomous descriptors that we apply to people in our lives to help us understand them and predict their behavior. We also apply personal constructs to ourselves. Our personal constructs shape the way we think, feel, and behave, forming important aspects of personality. Constructs can fall into many categories. One taxonomy includes the construct categories Moral (e.g., Good–Bad), Emotional (e.g., Warm–Cold), Relational (e.g., Dependent–Independent), Personal (e.g., Hardworking–Lazy), Intellectual (e.g., Cultured–Uncultured), Values and Interests (e.g., Idealist–Materialist), Existential (e.g., Growth–Stagnation), and Concrete (e.g., Attractive–Ugly).

Research suggests that individuals' personal constructs are similar to those of their friends and romantic partners; are associated with personality, behavior, and mental health; differ by culture; and remain relatively stable within individuals over time. People higher in cognitive complexity tend to be higher in openness to experience, extraversion, conscientiousness, cognitive ability, mental health and coping, empathy, sensitivity to racism, and multicultural experience and identity. Additional research has found that people grow in cognitive complexity as they age.

The more diverse the constructs a person applies to others to understand the world, the more cognitively complex they are. People high in cognitive complexity are better able to predict the behavior of others. They more readily recognize differences between themselves and others. They are more empathic, less anxious and unstable, deal better with inconsistent information in construing others, and experience greater complexity in childhood than people high in cognitive simplicity. Those high in attributional complexity tend to assume the behavior of other people is a result of more

complex and multifaceted reasons than do those low in attributional complexity.

Kelly assessed personality by accepting a person's words at face value, by having the person write a self-characterization sketch, and by the Role Construct Repertory (REP) Test. The REP Test uncovers dichotomies important in a person's life, revealing the pattern of personal constructs.

Kelly presented an optimistic image of human nature that depicts us as rational beings with free will, capable of directing our destiny. We are not bound by constructs developed at one stage of life or by past experiences, unconscious conflicts, and biological instincts. Our goal is to define a set of constructs that enables us to predict events.

Kelly's work has been criticized for omitting familiar concepts such as motivation and emotion, for focusing on the rational aspects of human functioning to the exclusion of emotional aspects, and for relying on an unrepresentative sample of participants.

Review Questions

1. How does Kelly's approach to personality differ from the other approaches we have discussed?
2. Describe what a personal construct is, and describe how they are adaptive.
3. Define each of the 11 corollaries of personal constructs.
4. Identify and define each of the categories of personal constructs.
5. What is a construct's range of convenience? How does the range of convenience change over time?
6. Explain how the Role Construct Repertory (REP) Test works.
7. Summarize four research findings using the REP.
8. Summarize four research findings on cognitive complexity.
9. Compare and contrast Kelly's assessment techniques: interviewing, self-characterization sketches, and fixed role therapy.
10. Discuss some of the criticisms that have been made of Kelly's approach to personality.
11. Explain how Kelly's theory of personality helps us understand issues of diversity, equity, and inclusion.

Suggested Readings

- Butler, R. (Ed.). (2009). *Reflections in personal construct theory.* Wiley. Essays by leading practitioners of Kelly's approach to therapy from a variety of countries, offering advice on how to conduct therapeutic relationships with patients using personal construct psychology.
- Butt, T. (2008). *George Kelly and the psychology of personal constructs (mind shapers).* Palgrave Macmillan. Explores Kelly's idea that personality is not caused by what happens to us but rather by our widely differing interpretations of what happens. Sets the theory in its historical and philosophical context.
- Caputi, P., Viney, L. L., Walker, B. M., & Crittenden, N. (Eds.). (2011). Personal construct methodology. John Wiley & Sons. Articles by followers of Kelly's approach detailing techniques for gathering and analyzing data, along with descriptions and examples of applications of personal construct psychology in clinical and nonclinical settings.
- Epting, F. R. (1984). *Personal construct counseling and psychotherapy*. Wiley. The first major textbook on the principles of Kelly's personality theory and their clinical applications.
- Fransella, F. (1995). *George Kelly.* Sage. Describes Kelly's life and the development and applications of personal construct theory. Reviews the concept of constructive alternativism using Kelly's personality as an example.
- Kelly, G. A. (1955). *The psychology of personal constructs.* Norton. Kelly's seminal work.
- Kelly, G. A. (1969). *Clinical psychology and personality: The selected papers of George Kelly*. Wiley. Selections from Kelly's writings, edited by Brendan Maher. See Chapter 2, "The Autobiography of a Theory," for Kelly's description of the impact of his personal experiences on the development of his theory.
- Jankowicz, D. (2004). *The easy guide to repertory grids.* John Wiley Books.
- Thompson, G. G. (1968). George Alexander Kelly: 1905–1967. *Journal of General Psychology*, *79*, 19–24. Reviews and assesses Kelly's life and work.

Part 7

The Behavioral Approach

Perhaps you already know of John B. Watson, the founder of behaviorism, from your other courses in psychology. His behaviorist psychology focused solely on overt behavior, on how people respond to external stimuli. This approach to psychology, based on careful experimental research and the precise quantification of stimulus and response variables, became popular in the 1920s and remained a dominant force in psychology for more than 60 years.

Watson's behaviorism had no place for conscious or unconscious forces because they could not be seen, manipulated, or measured under laboratory conditions. Watson believed that whatever might be happening internally to an organism, between the presentation of the stimulus and the elicitation of the response, had no place in science. Why? Because scientists (at least at that time) could not perform experiments on internal, unobservable conditions.

In the behavioral approach to psychology, therefore, we find no reference to anxiety, drives, motives, needs, defense mechanisms, traits, cognitive constructs—the kinds of internal processes invoked by most other personality theorists. To behaviorists, personality is merely an accumulation of learned responses to various stimuli. Personality refers only to what can be objectively observed and manipulated.

The behavioral approach to personality is represented here by the work of B. F. Skinner, who, continuing with Watson's approach, rejected as irrelevant any alleged internal forces or processes. His sole concern was with overt behavior and the external stimuli driving it.

Skinner attempted to understand what we call "personality" through laboratory research with rats and pigeons rather than clinical work with patients or research with people across the personality distribution. His ideas turned out, however, to become immensely useful in the clinical setting through the application of behavior-modification techniques, and somewhat insightful in understanding personality as emerging from the ways that people respond to their environments.

Chapter 12

It is the environment which must be changed. —B. F. Skinner

B. F. Skinner: Reinforcement Theory

Learning Objectives

12.1 Compare and contrast Skinner's theory with those of psychoanalysts, developmental stage theorists, and humanists, providing two examples of similarities and differences for each.

12.2 Contrast the processes of classical conditioning and operant conditioning.

12.3 List four schedules of reinforcement.

12.4 Identify the process by which superstitious behavior develops.

12.5 Describe the programs that apply operant conditioning to help encourage healthier behavior and decrease maladaptive behavior.

12.6 Compare and contrast positive reinforcement, negative reinforcement, and punishment.

12.7 Explain how self-control, within and beyond the behaviorist framework, relates to behavior.

12.8 Outline the principles of behaviorism that can be applied to understand individual differences in personality.

12.9 Compare and contrast the assessment techniques of direct observation, self-report, and physiological measurements of behavior.

12.10 Summarize Skinner's theory of personality (behavior) in five sentences.

Rats, Pigeons, and an Empty Organism

Skinner did not offer a personality theory that can easily be compared with others discussed in this book, largely because he did not present a coherent theory of personality or aim to focus on personality specifically. Instead, his work attempted to account for *all* behavior (which you can think about as a result of or manifestation of personality according to other perspectives) in factual, descriptive terms. Skinner argued that psychologists must restrict their investigations to only what they can see, manipulate, and measure in the laboratory. That meant an exclusive emphasis on the overt responses a person makes and nothing more. Skinner's contention was that psychology is the science of behavior, of what an organism does. His study of behavior contrasts, then, with psychoanalytic, trait, life-span, cognitive, and humanistic approaches, differing not only in subject matter but in methodology and aims.

In explaining personality, most other theorists look inside the person for clues. The causes, motives, drives, and cognitions—the forces that direct our development and behavior—originate within each of us. In contrast, Skinner made no reference to internal, subjective states to account for behavior. Unconscious influences, defense mechanisms, traits, and other driving forces cannot be seen, he argued, and therefore they have no place in scientific psychology.

Skinner did not deny the existence of internal forces, only that they could not be studied via science. Skinner applied similar reasoning to physiological processes, which are not overtly observable and so have no relevance for science. He said, "The inside of the organism is irrelevant either as the site of physiological processes or as the locus of mentalistic activities" (quoted in Evans, 1968, p. 22). He saw no need to examine inside the organism for some form of inner activity. To Skinner, human beings are "empty organisms," by which he meant that there is nothing inside us that can explain behavior in scientific terms.

Where Are the People?

Another way Skinner differed from other theorists is in his choice of experimental participants. Some personality theorists focus on people with psychopathology, others on individuals without clinical symptoms. At least one, Abraham Maslow, based his theory on exemplars. Although Skinner's ideas about behavior have been applied to people, and we'll discuss some of that research, the research for his behavioral approach used rats and pigeons. What can we learn from pigeons about the human personality?

Responding to stimuli is something animals do well and may constitute the majority of what drives their behavior. Skinner admitted that human behavior is more complex than animal behavior but suggested that the differences are in degree, not in kind. He believed that the fundamental processes are similar. And because a science must proceed from simple to complex, the more elemental processes should be studied first. Thus, he chose animal behavior because it is simpler than human behavior.

Despite Skinner's focus on studying animal behavior, his work has informed both theory and practical applications for understanding and changing human behavior. Research building on the behaviorist perspective helps us understand the contextual, situational, and social stimuli that drive behaviors that we would otherwise attribute to personality factors. Techniques such as behavior therapy derived from his research are used in clinical settings to treat a variety of disorders. His behavior-modification techniques are also widely used in schools, businesses, correctional institutions, and hospitals.

The Life of Skinner (1904–1990)

A Strict Childhood

B. F. Skinner was born in Susquehanna, Pennsylvania, the older of two sons, but his brother died at the age of 16. His parents were hardworking people who constantly dictated to him clear rules of what they considered proper behavior. "I was taught to fear God, the police, and what people will think" (Skinner, 1967, p. 407). His mother never deviated from her strict standards. Her method of control was to say, "tut tut."

Skinner's grandmother made certain that he understood the punishments of hell by pointing out the red-hot coals in the parlor stove. Skinner's father showed Skinner the county jail and took him to a lecture about what life was like in a notorious New York state prison in an attempt to discourage illicit behavior.

In his autobiography, Skinner made many references to the impact of these childhood warnings on his adult behavior. He wrote of visiting a cathedral as an adult and taking care to avoid stepping on the gravestones set on the floor. As a child he had been told time and time again that such behavior wasn't proper.

Those kinds of experiences made it clear to Skinner that his adult behaviors had been determined by the rewards and punishments (the "reinforcements") he had received as a child. Thus, his system of psychology and his view of people as "complex system[s] behaving in lawful ways" may have reflected his own early life experiences (Skinner, 1971, p. 202).

Machines and Animals

Also prophetic of his conception of people as machines that operate predictably were the many hours he spent as a child constructing mechanical devices such as wagons, seesaws, carousels, slingshots, model airplanes, and a steam cannon that shot potato and carrot plugs over neighboring houses. Skinner also worked on a perpetual-motion machine, which perpetually failed to work. He was also interested in animal behavior since childhood.

He made pets of turtles, snakes, toads, lizards, and chipmunks. A flock of performing pigeons at a county fair fascinated him. He watched the pigeons race onstage, pull a toy fire engine up to a burning building,

and shove a ladder against the wall. One pigeon, wearing a fireman's hat, climbed up the ladder to an upper-story window and rescued a stranded pigeon. Skinner would later train pigeons to play ping-pong and guide a missile to its target. He also taught his daughters' cat to play the piano and his pet beagle how to play hide and seek.

A Dark Year

Skinner majored in English at Hamilton College in upstate New York and after graduation expected to become a novelist. He built an office in the attic of his parents' home in Scranton, Pennsylvania, and sat down to write. He did not write much very quickly. He read, listened to the radio, played the piano, and built ship models while waiting for inspiration, which never came. He considered seeing a psychiatrist, but his father told him it would be a waste of money. Skinner was 22 years old and was not doing the work he had planned to do.

He later referred to that time as his dark year, what Erikson perhaps would call an identity crisis. Skinner's occupational identity as a writer, which he had so carefully constructed during his college years, had collapsed and took with it his sense of self-worth. He left Scranton for New York City's Greenwich Village but found he could not write there either. Worse was that several women did not return his proclaimed love for them, leaving him so upset that he branded one woman's initial on his arm, where it remained for years (Skinner, 1983).

A New Identity

Just when Skinner thought he had lost all hope, he discovered a new identity that suited him, to which he would cling for the rest of his life. He decided that since writing had failed him (rather than the other way around), he would study human behavior by the methods of science rather than the methods of fiction. He read Pavlov and Watson and committed himself to behaviorism in thought and deed.

He entered Harvard in 1928 to study psychology. He had never taken a course in the field before, but he earned his PhD in three years. His choice of behaviorism led him to reject all the feelings and emotions he had tried to draw on as a writer. As one historian of psychology noted:

> [There are] essential differences between a career devoted to writing poetry and fiction and one devoted to promoting the cause of behaviorism. The former requires commitment to such intra-psychic processes as inspiration, intuition, free association, the stream of consciousness, and the participation of the unconscious, as well as considering fantasies and feelings important parts of one's being. The latter denies it all—makes fantasies and feelings, indeed the entire intra-psychic domain, recede into a background of (to use Skinner's favorite term) "pre-scientific" notions, while attention is focused on observable behavior and the operations necessary to record, predict, and control it effectively. (Mindess, 1988, p. 105)

Psychic processes appeared in Skinner's work only as objects of derision.

A Period of Depression

With postdoctoral fellowships, Skinner stayed at Harvard until 1936. He then taught at the University of Minnesota and Indiana University, returning to Harvard in 1947. In his 40s, Skinner experienced a period of depression, which may have inspired his return to writing. He projected all of his emotional and intellectual discontent onto the protagonist of a novel, *Walden Two*, letting the character vent his personal and professional frustrations (Skinner, 1948).

The book, which is still in print, has sold more than two million copies. It describes a society in which all aspects of life are controlled by positive reinforcement, which is the basic principle of Skinner's system of psychology (Altus & Morris, 2009). It has been suggested that *Walden Two* can be seen as a precursor to the major themes in the more recent positive psychology (Adams, 2012) (refer to Chapter 14).

Quirky, Conscientious, and Somewhat Neurotic

Early on in his career, Skinner responded to both the Rorschach and the Thematic Apperception Test. In 2012, a group of psychologists in Norway examined his test results and drew several conclusions about Skinner's personality (Gronerod et al., 2013; Koren, 2013; Overskeid et al., 2012).

They rated him high in conscientiousness and openness to new experiences, somewhat extraverted, and neurotic. He was also characterized as quirky and driven in his work, with strained social relationships and a lack of liveliness. One of his daughters said he was a wonderful father who spent a great deal of time with his children (Freeman, 2013).

Well into his 80s, Skinner continued to work with enthusiasm and dedication. He regulated his habits,

recording his daily work output and the average time spent per published word (2 minutes). Thus, he became a living example of his definition of humans as complex systems behaving in lawful ways.

He once commented to a friend that he was cited in psychology literature more frequently than Freud was. When asked if that had been his goal, Skinner said, "I thought I might make it" (quoted in Bjork, 1993, p. 214).

Reinforcement: The Basis of Behavior

Skinner's approach to behavior, simple in concept, is based on thousands of hours of well-controlled research. His fundamental idea is that behavior can be controlled by its consequences, that is, by what follows the behavior. Skinner believed that an animal or a human could be trained to perform virtually any act and that the type of reinforcement that followed the behavior would be responsible for determining it. This means that whoever controls the reinforcers has the power to control human behavior, in the same way an experimenter can control the behavior of a laboratory rat.

Respondent Behavior

Skinner distinguished between two kinds of behavior: respondent behavior and operant behavior. **Respondent behavior** involves a response made to or elicited by a specific stimulus. A reflexive behavior such as a knee jerk is an example of respondent behavior. A stimulus is applied (a tap on the knee), and the response occurs (the leg kicks). This behavior is unlearned. It occurs automatically and involuntarily. We do not have to be trained or conditioned to make the appropriate response.

Conditioning At a higher level is respondent behavior that is learned. This learning, called *conditioning*, involves the substitution of one stimulus for another. The concept originated in the work of the Russian physiologist Ivan Pavlov in the early 1900s. Later, Pavlov's ideas on conditioning were adopted by John B. Watson as the basic research method for behaviorism.

Working with dogs, Pavlov discovered that they would salivate to neutral stimuli such as the sound of their owner's footsteps. Previously, the salivation response had been elicited by only one stimulus, the sight of food. Intrigued by this observation, Pavlov studied the phenomenon systematically.

He sounded a bell shortly before feeding the dog. At first, the dog salivated only in response to the food and not to the bell because the bell had no meaning. However, after a number of pairings of the bell followed by the food, the dog began to salivate at the sound of the bell. Thus, the dog had been conditioned, or trained, to respond to the bell. The dog's response shifted from the food to what previously had been a neutral stimulus.

This process, that evokes respondent behavior to a new stimulus, is **classical conditioning** or Pavlovian conditioning. In classical conditioning, the organism learns through association. A neutral stimulus (NS; e.g., bell) is presented simultaneously to the unconditioned stimulus (US; e.g., food) that naturally cues the unconditioned response (UR; e.g., salivation), such that the NS will become a conditioned stimulus (CS; e.g., bell) that cues the conditioned response (CR; e.g., salivation). Refer to Figure 12.1.

Reinforcement This classic experiment by Pavlov demonstrated the importance of **reinforcement**. The dogs would not learn to respond to the bell unless they were rewarded for doing so. In this example, the reward was food. Pavlov then formulated a fundamental law of learning: A conditioned response cannot be established in the absence of reinforcement. The act of reinforcing a response strengthens it and increases the likelihood that the response will be repeated.

Extinction An established conditioned response will not be maintained in the absence of reinforcement over time, however. Consider a dog conditioned to respond to the sound of a bell. Every time the bell rings, the dog salivates. Then the experimenter stops presenting food after sounding the bell. The dog hears the bell, and nothing happens—no more food, no more reinforcement. With successive ringing of the bell without food, the dog's salivary response decreases in frequency and intensity until no response occurs at all.

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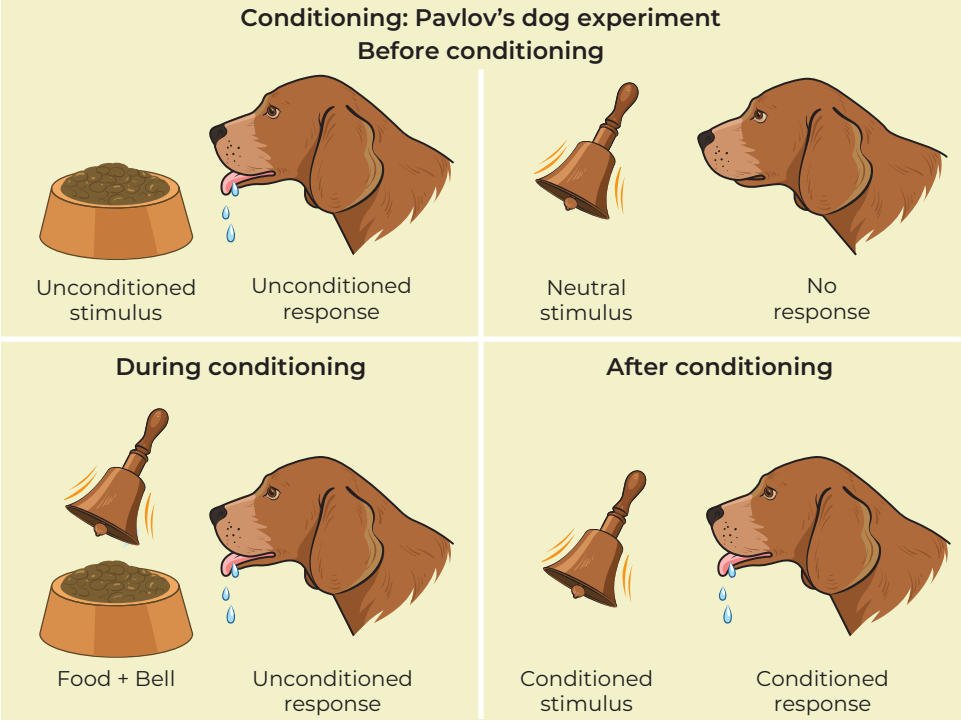
respondent behavior Responses automatically made to or elicited by specific environmental stimuli.

classical conditioning The process by which a neutral stimulus comes to elicit a response when repeatedly paired with a stimulus that already elicited that response.

reinforcement The act of strengthening a response by adding a reward, thus increasing the likelihood that the response will be repeated.

Figure 12.1

Pavlov conditioned his dogs to respond to a bell the same way they responded to food.



This process is called **extinction**. The response has been wiped out or extinguished because reinforcers or rewards for it were no longer provided. A great deal of research has demonstrated that the greater the reinforcement given during training, the more resistant the conditioned response will be to extinction (Shull & Grimes, 2006). Eventually, however, extinction will occur if the conditioned stimulus (e.g., bell) continues to be presented without the unconditioned stimulus (e.g., food).

Pause for Reflection

Can you think of any behaviors that you were classically conditioned to enact? Did these behaviors become extinct when the reinforcement was gone?

extinction The process of eliminating a conditioned response by withholding reinforcement.

operant behavior Behavior emitted spontaneously or voluntarily that operates on the environment to change it.

Operant Behavior

Respondent behavior depends on reinforcement and is related directly to a physical stimulus. Every response is elicited by a specific stimulus. To Skinner, respondent behavior was less important than **operant behavior**. We are conditioned to respond directly to many stimuli in our environment, but not all behavior can be accounted for in this way. Much human behavior appears to be spontaneous and cannot be traced directly to a specific stimulus. Such behavior is emitted rather than elicited by a stimulus. It involves acting in a way that appears to be voluntary rather than reacting involuntarily to a stimulus to which we have been conditioned.

The nature and frequency of operant behavior will be determined or modified by the reinforcement that follows the behavior. Respondent behavior has no effect on the environment. In Pavlov's experiment, the dog's salivary response to the ringing bell did nothing to change the bell or the reinforcer (the food) that followed. In contrast, operant behavior operates on the environment and, as a result, changes it.

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Animals can be conditioned by reinforcing them with food when they exhibit desired behaviors.

Operant Conditioning and the Skinner Box

To illustrate the **operant conditioning** process, let us follow the progress of a rat in Skinner's operant conditioning apparatus, also known as the Skinner box (Figure 12.2). When a food-deprived rat is placed in the box, its behavior at first is spontaneous and random. The rat is active, sniffing, poking, and exploring its environment. These behaviors are emitted, not elicited; in other words, the rat is not responding to any specific stimulus in its environment.

At some time during this random activity, the rat will press a lever or bar located on one wall of the Skinner box, causing a food pellet to drop into a trough. The rat's behavior (pressing the lever) has operated on the environment and, as a result, has changed it. How? The environment now includes a food pellet. The food is a reinforcer for the behavior of pressing the bar.

The rat now begins to press the bar more often. What happens? It gets more food—more reinforcement—and so presses the bar even more frequently. The rat's behavior is now under the control of the reinforcers. Its actions in the box are less random and spontaneous because it is spending most of its time pressing the bar and eating.

If we put the rat back in the box the next day, we can predict its behavior and we can control its bar-pressing actions by presenting or withholding the reinforcers or by presenting them at a different rate. Withholding the food extinguishes operant behavior in the same way that it extinguishes respondent behavior. If the unreinforced behavior no longer works, in that it no longer brings a reward, after a while it will stop. Thus, the person who controls the reinforcers controls the individual's behavior.

Pause for Reflection

Can you think of any behaviors that you were operantly conditioned to enact?

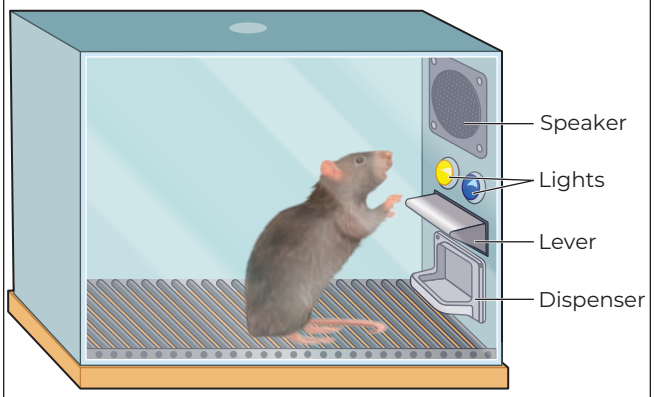
From the Skinner Box to the Real World

A variety of animals have been taught to perform a great many behaviors through operant conditioning. Dogs have been conditioned to sniff out drugs or explosives, giant African rats in Mozambique have been trained to detect buried land mines, lobsters have been taught to grasp a bar with their claws to receive food, whales and dolphins have been taught how to perform a variety of tricks in places like SeaWorld, and calves have been taught to urinate only in designated places (Gillaspy et al., 2014; Poling et al., 2010; Tomina & Takahata, 2010; Vaughan et al., 2014). More recently and perhaps surprisingly, African elephants have been trained via operant conditioning to detect landmines by indicating the smell of trinitrotoluene (TNT) (Miller et al., 2015), and cockroaches have been operant conditioned to navigate mazes (Arican et al., 2020). Some scholars have argued that operant condition is important to being able make veterinary care easier for animals and their caretakers in zoos

operant conditioning The process by which an emitted behavior operates on the environment to change it, and the consequence reinforces the behavior.

Figure 12.2

The Skinner box contains a lever for the rat to press to receive food, which positively reinforces pushing of the lever.



(Fernandez & Martin, 2021) and can be applied to animals in agriculture, such as chickens, horses, cows, goats, pigs, and sheep (Abramson & Kieson, 2016).

Operating on the Environment

Skinner believed that most human and animal behavior is learned through operant conditioning. Consider how babies learn. An infant initially displays random, spontaneous behaviors, only some of which are reinforced (rewarded with food or hugs or toys or diaper changes, for example) by parents, siblings, or caregivers. As the infant grows, the positively reinforced behaviors, those of which the parents approve or respond positively to, will persist, whereas those of which the parents disapprove or do not respond positively to will be extinguished or discontinued.

The concept is the same as the rat in the Skinner box. Behaviors that work (like pressing the bar to obtain food) are displayed frequently, and behaviors that do not work are not repeated. Thus, the organism's behavior operates on the environment. And in turn, the environment, in the form of reinforcement, operates on the organism's behavior.

You can see how powerful reinforcement can be in determining and controlling behavior. Skinner wrote, "Operant conditioning shapes behavior as a sculptor shapes a lump of clay" (1953, p. 91). If that lump of clay, that organism, needs the reinforcer badly enough, there is virtually no limit to how its behavior can be shaped—by an experimenter with a food pellet, a puppy owner with a dog biscuit, a mother with a smile, a boss with positive feedback, or a government with a promise.

From infancy on, we display many behaviors, and those that are reinforced will strengthen and form patterns. This is how Skinner described personality, as a pattern or collection of operant behaviors. What other psychologists called dysfunctional behavior was nothing more mysterious to Skinner than the continued performance of undesirable behaviors that somehow have been reinforced.

Indeed, processes as basic as attention are shaped by reinforcement learning; in a series of experiments with South Korean college students, researchers found that what people visually attended to could be biased by rewards (Cho & Cho, 2020). As Skinner would have predicted, behavioral parent training (BPT), which is based on operant conditioning, can be provided to encourage more adaptive behaviors in children with psychiatric disorders (Segers et al., 2018) and attention deficit hyperactivity disorder (ADHD) (Van der Oord & Tripp, 2020). Research with college students in the United States revealed that the efficacy of an app-based mindfulness training program for anxiety works to decrease worry and in turn improve sleep by changing the reward value of feelings of worry (Brewer et al., 2020). Operant conditioning has also been applied to understanding and supporting healthier states when it comes, for example, to chronic pain (Vlaeyen & Crombez, 2020) and obesity and eating disorders (Stojek & MacKillop, 2017).

Having demonstrated how behavior could be modified by continuous reinforcement, that is, by presenting a reinforcer after every response, Skinner decided to consider how behavior would change if he varied the rate at which the behavior was reinforced.

Schedules of Reinforcement

Skinner pointed out that in everyday life outside the psychology laboratory, our behavior is rarely reinforced every time it occurs. Babies are not picked up and cuddled every time they cry. Baseball superstars do not hit a home run every time at bat. People don't instantly look and feel stronger and healthier right after every workout. And your favorite music artist doesn't win a Grammy for every new song. You can think of many more examples of behaviors that persist even though they are reinforced only occasionally.

After observing that his rats continued to press the bar at a fairly constant rate even when they were not being reinforced for each response, Skinner decided to investigate different **reinforcement schedules** to

reinforcement schedules Patterns or rates of providing or withholding reinforcers.

determine their effectiveness in controlling behavior. Among the rates of reinforcement he tested are the following:

1. Fixed interval
2. Fixed ratio
3. Variable interval
4. Variable ratio

Fixed Interval

A *fixed-interval schedule of reinforcement* means that the reinforcer is presented following the first response that occurs after a fixed time interval has elapsed. That interval might be 1 minute, 3 minutes, or any other consistent period of time. The timing of the reinforcement has nothing to do with the number of responses. Whether the rat responds 3 times or 20 times per minute during the fixed time interval, the reinforcer still arrives only after the passage of a given time period and the emission of the correct response.

Many situations operate in accordance with the fixed-interval reinforcement schedule. For example, salaried jobs might pay once a week, once every two weeks, or once a month. The person is not paid according to the number of items they produce or the amount of work they complete (the response), but by the number of hours, days, or weeks that elapse.

Skinner's research demonstrated that the shorter the interval between presentations of the reinforcer, the greater the frequency of response. The response rate declined as the interval between reinforcements lengthened. How frequently reinforcers appeared also affected how quickly the response could be extinguished.

The response stopped sooner if the rat had been reinforced continuously and the reinforcement was then stopped compared to if the rat had been reinforced intermittently. The fixed-interval schedule has been found to be highly effective in real-world situations, including special education classrooms where maladaptive behavior can be reduced (Tomlin & Reed, 2012). As mentioned previously, BPT has been employed to discourage oppositional behavior in children with ADHD, and scholars have reviewed relevant literature that suggests children with ADHD are more responsive to but are more likely to evince extinction to fixed interval rewards compared to children without ADHD (Van der Oord & Tripp, 2020).

Fixed Ratio

In the *fixed-ratio schedule of reinforcement*, reinforcers are given only after a specified number of responses have been made. For example, the experimenter could reinforce after every 10th or 20th response. In this schedule, unlike the fixed-interval schedule, the presentation of reinforcers depends on how often the subject responds. The rat will not get a food pellet until it performs the required number of responses. This reinforcement schedule brings about a faster rate of response than does the fixed-interval schedule.

The higher response rate for the fixed-ratio reinforcement schedule also applies to humans. In a job in which your pay is determined by the number of responses, such as number of sales or pieces written, how much you earn depends on how much you produce. The more items you produce, the higher your pay. Your reward is based directly on your response rate. The same is true for a salesperson working on commission. Income depends on the number of products sold; the more sold, the more earned. In contrast, a salesperson on a weekly salary (a fixed-interval schedule) earns the same amount each week regardless of the number of items sold.

One example of how fixed ratios shape individual differences is evident in a review of the literature on reinforcement as it relates to obesity and disordered eating (Stojek & MacKillop, 2017). This review suggests that obesity may result from increased reward value of food, and this is evident in individuals' willingness to work for food rewards at fixed ratios.

Variable Interval

Everyday life doesn't always permit a fixed-interval or fixed-ratio reinforcement schedule. Sometimes reinforcers are presented on a variable basis. In the *variable-interval schedule of reinforcement*, the reinforcer might appear after 2 hours the first time, after 1 hour and 30 minutes the next time, and after 2 hours and 15 minutes the third time. A person who spends the day fishing might be rewarded, if at all, on a variable-interval basis. The reinforcement schedule is determined by the random appearance of fish nibbling at the bait. Research with children with ADHD finds that learning according to reinforcement via variable intervals may be less efficient for children with that diagnosis than children without (as reviewed in Van der Oord & Tripp, 2020).

Variable Ratio

A *variable-ratio schedule of reinforcement* is based on an average number of responses between reinforcers, but there is great variability around that average. Rewarding rats with food pellets on the 4th press at one point and on the 6th, 11th, or 19th bar press is an example of a variable-ratio schedule. Even if the average is the 10th bar press, the ratio is too random for the rat to predict

the next reward, so they just kept pressing. Skinner found that the variable-ratio schedule is effective in bringing about high and stable response rates.

One example of this pattern of reinforcers is wins at gambling, as casinos can happily attest. Slot machines, roulette wheels, and state lottery games pay on a variable-ratio reinforcement schedule, an extremely effective means of controlling behavior. Indeed, a review of the neural substrates of gambling addiction highlights the importance of variable reinforcement to enjoyment of gambling, to which some people's brains respond with more reward than others' (Murch & Clark, 2016).

Variable reinforcement schedules result in enduring response behaviors that tend to resist extinction. Most everyday learning occurs as a result of variable-interval or variable-ratio reinforcement schedules. Research in China with university students suggests that operant conditioning via these approaches may work regardless of certain personality traits, such as psychopathy (Chen et al., 2020).

Skinner's research on reinforcement schedules found that they are effective for controlling, modifying, and shaping behavior. If you are in charge of rats, salespeople, or assembly-line workers, or are trying to train your pet or raise your child, these operant conditioning techniques have the potential to bring about the behaviors you want.

Pause for Reflection

Why do you think some schedules of reinforcement are more effective than others in different contexts?

The Shaping of Behavior

In Skinner's original operant-conditioning experiment, the operant behavior (pressing the lever) is a simple behavior that a laboratory rat would be expected to display eventually in the course of randomly exploring its environment. Thus, the chance is high that such a behavior will occur, assuming the experimenter has sufficient patience.

It is obvious, however, that animals, and humans especially, demonstrate many more complex operant behaviors that have a much lower probability of occurring in the normal course of events. How are these complex behaviors learned? How can an experimenter or even a teacher, coach, or parent reinforce behaviors that are not likely to occur spontaneously?

successive approximation A series of rewards given to positively reinforce incremental behavior changes as they become closer and closer to the desired behavior; one way by which complex behaviors are learned.

Successive Approximation

Skinner answered these questions with the method of **successive approximation**, or *shaping* (Skinner, 1953). He trained a pigeon in a very short time to peck at a specific spot in its cage. The probability that the pigeon on its own would peck at that exact spot was low. At first, the pigeon was reinforced with food when it merely turned toward the designated spot. Then reinforcement was withheld until the pigeon made some movement, however slight, toward the spot.

Next, reinforcement was given only for movements that brought the pigeon closer to the spot. After that, the pigeon was reinforced only when it thrust its head toward the spot. Finally, the pigeon was reinforced only when its beak touched the spot. Although this sounds like a time-consuming process, Skinner conditioned pigeons in less than 3 minutes.

The experimental procedure itself explains the term *successive approximation*. The organism is reinforced as its behavior comes in successive, or consecutive, stages to approximate the final desired behavior. Skinner suggested that this is how children learn the complex behavior of speaking. Infants spontaneously emit meaningless sounds, which parents reinforce by smiling, laughing, and talking.

After a while, parents reinforce this babbling in different ways, providing stronger reinforcers for sounds that approximate real words. As the process continues, parental reinforcement becomes more restricted, given only for appropriate usage and proper pronunciation. Thus, the complex behavior of acquiring language

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Skinner used successive approximation to train pigeons quickly, but this strategy is also used for teaching complex behavior.

skills in infancy is shaped by providing differential reinforcement in stages.

The method of successive approximation has been applied in various contexts, including helping children with selective mutism learn to talk (Bork & Bennett, 2020), people with public speaking anxiety feel more at ease when speaking to others (Lindner et al., 2021), mentoring graduate students (Hong & del Busto, 2020), and recovering from relapse in the context of negative health-related behaviors (DiClemente & Crisafulli, 2022).

Shaping the Behavior of a Person in Five Minutes

Skinner claims that he once shaped the behavior of a noted psychoanalyst, Erich Fromm, whose comments during a lecture annoyed him.

> Fromm proved to have something to say about almost everything, but with little enlightenment. When he began to argue that people were not pigeons, I decided that something had to be done. On a scrap of paper I wrote [to a colleague] "Watch Fromm's left hand. I am going to shape a chopping motion" . . . [Fromm] gesticulated a great deal as he talked, and whenever his left hand came up, I looked straight at him. If he brought the hand down, I nodded and smiled. Within five minutes he was chopping the air so vigorously that his wristwatch kept slipping out over his hand. (Skinner, 1983, pp. 150–151)

Superstitious Behavior

We know that life is not always as orderly or well controlled as events in a psychology laboratory. Sometimes we are reinforced accidentally after we have displayed some behavior. As a result, that behavior, which did not really lead to or cause the reinforcement in any way, may be repeated in a similar situation given we experienced accidental reinforcement.

Consider two examples from football. An offensive lineman for the Tampa Bay (FL) Buccaneers was having a terrible season early in his career. He asked his roommate to switch beds so that he could sleep closer to the bathroom. Immediately thereafter, his playing improved. For the rest of his career, he insisted on the bed nearest the bathroom door in every hotel in which the team stayed.

Then there was an NFL kicker who hugged the goal posts before each game. He had done it once just before making a successful kick, and, because it had worked then, he continued the practice. He told a reporter that he wanted the goal posts to know he loved them and to implore them to stay still when he kicked.

Skinner called this phenomenon **superstitious behavior** and demonstrated it in the laboratory. A hungry pigeon was placed in the operant-conditioning apparatus and reinforced every 15 seconds on a fixed-interval schedule. It is highly likely that the pigeon would be doing something, displaying some behavior or activity, when the reinforcing food pellet was presented. It might be turning, raising its head, strutting, hopping, or standing still. Whatever behavior was being emitted at the moment of reward would be reinforced.

Skinner found that a single reinforcement was powerful enough to lead the pigeon to repeat the accidentally reinforced behavior more frequently for a while, which increased the probability that another food pellet would appear while the same behavior occurred. And with short intervals between reinforcers, superstitious behaviors are learned quickly.

Like the football players in the examples mentioned previously, the superstitious behaviors displayed by the pigeon have no functional relationship to the reinforcers. The connection is unintentional. In humans, such behaviors may persist throughout life and require only occasional reinforcement to sustain them.

A study of major league baseball players in the United States and Japan found that 74 percent of the players admitted engaging in superstitious behavior. It was also found that American players were more superstitious than Japanese players on average, suggesting that cultural differences may influence the extent of these actions (Burger & Lynn, 2005). Indeed, superstitions are culturally transmitted human behaviors that are picked up based on what seems adaptive for one's environment, form habits, and are more likely to occur if they're easier and less costly to enact (Mandal, 2018).

Another study in the United Kingdom experimentally induced superstitious behavior by giving more or less positively framed feedback to adults practicing their golf putting regardless of how well the participants actually performed; in a follow-up activity, people tended to use the "positive" putter and even claimed it had a better weight and was more comfortable and easier to use than the other putter (Churchill et al., 2015).

In a review of the literature on superstitious behavior in sport (Dömötör et al., 2016), scholars conclude that superstitious behaviors are maintained by mechanisms similar to that of a placebo effect—expectations of positive results drive perceptions of positive results

superstitious behavior Persistent behavior that has a coincidental and not a functional relationship to the reinforcement received.

or behaviors that make positive results more likely. Superstitious behaviors include rituals, which athletes believe are magical; they can lower anxiety and increase self-efficacy and self-confidence. But at the same time, athletes may feel that such rituals control their behavior. Slightly different, pre-performance routines are another kind of superstitious behavior, directly affect technical performance, and can shape psychological and physiological preparation for the athletic competition. Such routines support attentional control, warm-up, and automatic skill execution and are not thought to be magical or controlling.

What kind of goals elicit superstitious behaviors? Researchers answered this question through a series of studies with Americans that indicate that achievement goals, more than learning goals, are more likely to evoke superstitious behaviors (Hamerman & Morewedge, 2015). People who are higher in performance orientation engaged in more superstitious behavior than people low in that trait, whereas people's level of learning orientation was not related to superstitious behaviors. When primed to pursue performance rather than learning goals, people preferred "lucky" items to neutral ones, and people felt more confident that they could achieve their goals when they had a "lucky" item. People were also more likely to engage in superstitious behavior when it was more uncertain whether one could complete the achievement goal.

Pause for Reflection

Superstitious behaviors are common. Do you engage in any of these behaviors? If so, do they fall in the category of rituals or preparation for performance?

Applications of Operant Conditioning

Psychologists have applied Skinner's operant-conditioning techniques to modify human behavior in clinical, business, and educational settings. **Behavior modification** has been used successfully with children and adults, with those facing mental health challenges to various extents, and with individual as well as group behaviors.

behavior modification A form of therapy that applies the principles of reinforcement to bring about desired behavioral changes.

token economy A behavior-modification technique in which tokens, which can be exchanged for valued objects or privileges, are awarded for desirable behaviors.

Token Economy Programs

The classic application of behavior modification is the **token economy**. In the pioneering study, women patients with symptoms of psychosis in a state mental institution were treated with behaviorist methods (Ayllon & Azrin, 1968). The patients had been institutionalized for a long time, were unable to care for themselves, and were not responding to other forms of therapy.

In the new therapy, the patients were offered opportunities to work at jobs, usually performed by paid hospital attendants, for which they would receive tokens. The tokens functioned like money, hence the term *token economy*. Like people outside the institution, the patients could buy goods and privileges to improve their quality of life.

With a certain number of tokens, they could purchase candy, lipstick, gloves, and newspapers, or go to a movie, walk around the hospital grounds, or upgrade to a better room. The most expensive privileges, requiring 100 tokens, were an escorted trip into town and a private meeting with a social worker. A private meeting with a psychologist was worth only 20 tokens.

What kinds of behaviors did the patients have to emit to be reinforced and receive tokens? If they took baths, brushed their teeth, made their beds, combed their hair, and dressed properly at the designated times, they earned a token for each activity. They would be paid up to 10 tokens for each period of work in the hospital kitchen or laundry, or for helping clean the ward, run errands, or take other patients for walks. The tasks may seem simple to us, but before the token economy program began, these patients exhibited behavior dysregulation and appeared unable to perform basic daily tasks.

The conditioning worked dramatically. Not only did the patients take charge of their personal hygiene and clean their surroundings, but they also performed a variety of tasks. They began interacting socially with one another and with the staff and even assumed some responsibility for patient care. Their self-esteem improved markedly, and they became less dependent. Notably, though, such an approach could be criticized as taking advantage of these patients and evoking labor from them for treatment they should have a

right to regardless. It is important to assess the ethics of such programs.

Pause for Reflection

What costs and benefits do you think should be weighed in deciding whether a token economy program is good for the people participating?

Notwithstanding criticism of that early instantiation of this method, token economy programs have worked in a variety of institutional settings as a way of reducing maladaptive behaviors and encouraging adaptive ones. For example, aggressive behaviors among patients with cognitive impairment in a psychiatric hospital were reduced by 79 percent following a nine-month token economy program (DePhilippis et al., 2008). The use of the token-economy approach also proved highly effective in reducing harmful behavior of children with autism spectrum disorder (ASD) in Japan (Ogasahara et al., 2013).

This token-economy approach to changing behavior has also worked online, as evidenced in a study of people who smoke frequently. Over a four-week period the smokers made video recordings of themselves at home twice a day, including recording themselves providing a breath carbon monoxide sample, which was sent electronically to the smoking clinic.

The subjects could earn vouchers by reducing their carbon monoxide level over a four-day period and by maintaining a level consistent with that of a nonsmoker. The vouchers could be exchanged for various items purchased online. The technique proved effective. Subjects significantly decreased in their carbon monoxide levels and were able to sustain abstinence from smoking throughout the period of the study (Dallery et al., 2007).

Token economies have also been applied to reduce speeding while driving in Canada (Mullen et al., 2015), tardiness to school by primary students in Nigeria (Simeon et al., 2015), and aggressive behaviors during recess for children in kindergarten through fifth grade in the United States (Yassine & Tipton-Fisler, 2021).

What Happens When the Tokens Stop? A note of caution about these impressive results. Reinforcement must be continued if the desired behavior changes are to persist. When tokens are no longer provided, reinforced behaviors usually revert to their original state (Kazdin & Bootzin, 1972; Reppucci & Saunders, 1974). However, when it comes to parenting or other contexts of caregiving, if caregivers are trained to reward desirable behaviors with reinforcers such as smiles, praise, hugs, and other signs of affection, then behaviors conditioned in the institutional token-economy situation are more likely to be continued in the home setting (Kazdin, 1989).

Behavior Modification Programs

Operant conditioning and reinforcement learning has been applied to solve many different problems in many different contexts in the form of behavior modification programs. Behavior modification programs have been successfully applied to education, where it has improved academic performance and social behavior in classrooms (Lang & Rispoli, 2015). For example, in a sample of majority Hispanic and Latino/a children, a behavior modification program that incorporated reinforcement for healthy social-emotional and self-regulation skills successfully improved school readiness for preschoolers with externalizing behavior problems (Graziano & Hart, 2016).

Behavior modification programs also have been employed to intervene on health issues. For example, in a study of over 2,300 people with pre-diabetes from Denmark, Finland, the United Kingdom the Netherlands, Spain, Bulgaria, New Zealand, and Australia, operant conditioning was applied to support healthier eating and exercise behaviors (Huttunen-Lenz et al., 2018). The more people attended the program sessions, the more successful they were, reporting stronger intentions to eat healthfully, higher self-efficacy, and more positivity about their health outcomes.

Operant-conditioning techniques have also been applied to problems in business and industry (e.g., McNamara & Andrasik, 2013): Behavior modification programs at major manufacturers, financial institutions, and government agencies can reduce absenteeism, lateness, and abuse of sick-leave privileges, and lead to improvements in job performance and safety.

The techniques can also be used to teach low-level job skills. Reinforcers used in business include pay, job security, recognition from supervisors, perks and status within the company, and the opportunity for personal growth. Remember, in the behaviorism method, no attempt is made to deal with any anxieties, trauma, or unconscious motivating forces. The focus is on changing overt behavior, defining the nature of the appropriate reinforcers, and determining their optimal rate of presentation to modify behavior.

Punishment and Negative Reinforcement

Most operant-conditioning applications involve positive reinforcement rather than **punishment** or negative reinforcement. The token-economy patients were not punished for failing to behave appropriately. Instead, they were reinforced when their behavior changed in positive ways. Skinner said that punishment was ineffective in changing behavior from undesirable to desirable or from abnormal to normal. Positive reinforcement administered for desirable behaviors is much more effective than punishment.

Punishment

Punishment is reinforcing a behavior by applying an aversive stimulus when the undesired behavior is performed.

Skinner said: "What's wrong with punishments is that they work immediately, but give no long-term results. The responses to punishment are either the urge to escape, to counterattack, or a stubborn apathy. These are the bad effects you get in prisons or schools, or wherever punishments are used" (Skinner quoted in Goleman, 1987).

For example, much research suggests that the punishment of spanking a child is not only ineffective but can cause negative psychological outcomes, leading to many countries outlawing spanking and other kinds of corporal punishment (Gershoff & Bitensky, 2007).

When it comes to nonphysical punishment, humans feel a strong urge to punish those who harm them or the group or who refuse to cooperate, but punishment, as Skinner suggested, may not be effective. As an example, in the context of making noncooperative others pay a fee as punishment for not sharing resources or helping the group in laboratory-based games, punishment does not consistently increase the person's cooperative behavior, as evidenced by a study in China (Li et al., 2018). Learning is more difficult when the feedback is punishment versus reward, especially for people who are self-critical. Instead, people who are more self-critical tend to learn better with rewards, as evidenced in two studies with Israeli psychology students learning rules for categorizing ambiguous stimuli (Duek et al., 2018).

However, there may be exceptions, with the efficacy of punishment depending on personality. In a study of American mother–toddler pairs, researchers found that for toddlers who exhibit oppositional and violent behaviors, some use (15% or less of the time) of punishment can reduce behavior problems (Larzelere et al., 2018). But that research also suggests that overall, across different situations and child personalities, power assertion and punishment are the least effective. Thus, it is important to consider the type of behavior being shaped.

Negative Reinforcement

Negative reinforcement is not the same as punishment. A negative reinforcer is an aversive or noxious stimulus, the removal of which is rewarding. In the laboratory or classroom, an operant conditioning situation can be established in which the unpleasant stimulus (such as a loud noise or an electric shock) will continue until the person (or animal) emits the desired response. As with positive reinforcement, the environment changes as a consequence of the behavior; in this case, the noxious stimulus will disappear.

We can see examples of negative reinforcement in everyday situations. A person may stop smoking to avoid the aversive stimulus of a social partner's criticism or a bothersome cough. The aversive stimulus (criticism or cough) should cease when the undesirable behavior (smoking) stops. Skinner opposed using noxious stimuli to modify behavior, noting that the consequences were not as predictable as with positive reinforcement. Also, he argued, negative reinforcement

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Criticizing or nagging someone until they do their homework is negative reinforcement, where an aversive stimulus is removed when the person engages in the desired behavior.

punishment The application of an aversive stimulus following a response in an effort to decrease the likelihood that the response will recur.

negative reinforcement The strengthening of a response by the removal of an aversive stimulus.

does not always work, whereas positive reinforcement is more consistently effective.

What does empirical work have to say about the efficacy of negative reinforcement? Some work supports Skinner's criticism of negative reinforcement. For example, in a study of over 700 Norwegian fathers and their one-year-old children, parenting with negative reinforcement was associated with developmental difficulties and less developed communication, whereas positive reinforcement was associated with sustained attention and better developed communication of the children (Nordahl et al., 2016). As another example, clinical psychologists who were employing cognitive behavior therapy (CBT) to treat anxiety disorders in American children aged 7 to 16, mostly Hispanic and Latino/a, trained parents engage in negative reinforcement less often in one treatment condition (Silverman et al., 2022). The children in that treatment group experienced a decrease in anxiety, and this was partially due to lower parental psychological control.

Pause for Reflection

Although Skinner did not consider the underlying psychological processes, what do you think is happening psychologically when people receive punishment or negative reinforcement that makes those types of reinforcement ineffective?

We can apply principles of behaviorism to understand personality by analyzing how stimulus–behavior links can vary from person to person. For example, different conditioning histories can lead to different personalities.

Behaviorism and Personality

Behaviorism can be applied to understand individual differences in personality. Broadly, think about how your past and present experiences shape your behavior. If every person has had a unique combination of experiences to condition them via reward, punishment, and negative reinforcement, then we should expect every person to have a unique combination of personality traits insofar as traits are clusters of behaviors. Different histories of conditioning help us understand how we differ.

We can also go further than just applying the behaviorist theorem that behaviors are a function of the environment to understand personality. Personality can be analyzed in terms of individual differences (i.e., differences across different people) in how the environment relates to behavior, or the moderators of functional principles (Perugini et al., 2016). Consider these five ways that personality may be described by the interaction between stimulus and behavior:

1. Individuals may differ in the extent to which presentation of the stimulus results in an increase in the frequency of behavior.

   Examples: Some people may evince a fear response over time more quickly to news reports of crime, demonstrating neuroticism. Some individuals may build habits of exercising more quickly in response to the positive feelings after ward, exhibiting what looks like better self-control.

2. Individuals may differ in their behavioral response to different kinds of reinforcement.

   Examples: Some people may be more sensitive to a positive reinforcer (e.g., food) than to an a negative reinforcer (e.g., being yelled at), pushing their personalities in whatever direction is being most strongly reinforced.

3. Individuals may respond differently to different stimulus content.

   Examples: Neuroticism may be captured in people's being especially reinforced by threat stimuli, whereas extraversion may be captured in people's being especially reinforced by social stimuli.

4. Individuals may differ in the timing of the most effective reinforcers.

   Examples: Some people may respond more strongly to stimuli presented right after a behavior or far after a behavior. Delay discounting is when the same (or even weaker) reinforcer has a larger impact of behavior when it is presented immediately after the behavior than when there is a delay between behavior or reinforcement. Not discounting delays and being able to get a reward for one's behavior much later (e.g., weight loss after many months of healthy eating and exercise, high grades after a semester of studying, happy relationships after years of therapy and thoughtful social interactions) underlies aspects of conscientiousness and self-control.

5. Individuals differ in the extent to which they shape their own environment.

   Examples: Some people self-regulate by choosing or changing their environment. Over time, some people may create completely different

life environments that serve as completely different stimuli compared to the environments of others. Some people might only buy healthy food, so their home environment only includes healthy food and they appear higher in conscientiousness.

But behaviorism can also help us understand how and why many of us evince similar patterns in personality development (Goddard, 2018). A meta-analysis of 92 longitudinal studies of personality change with over 50,000 participants found that there was a clear pattern of personality change in response to specific events across these diverse samples (Roberts et al., 2006). For example, when young adults move away from their family home and relatives to establish their own career and family, their conscientiousness and emotional stability increase—the beginning of what we have discussed as a maturity principle of personality. Those authors write:

> For example, a person's first job may bring expectations to show up on time, work hard . . . and interact in an agreeable manner with coworkers. These role expectations can affect change through either punishing inappropriate behavior or rewarding appropriate behavior. Violation of these expectations can lead to withdrawal of social approval and even tangible negative outcomes, such as losing one's job. In turn, meeting expectations should lead to greater levels of acceptance and social reinforcement. Therefore, role expectations can facilitate personality change by serving as guides for how one should act and possibly how one should change. (p. 18)

The implication is that similar conditions at this transition point elicit similar behaviors from different people, giving rise to similarities in the personality traits of conscientiousness and emotional stability.

In summary, personality can be understood not only as the result of individuals' unique and similar life experiences but also as described by dependencies of behavior on factors related to the stimuli that serve as reinforcers. Individuals may vary in how strongly (in terms of frequency of behavior) they respond to the same stimuli, in the kind and content of stimuli by which they are reinforced, in the timing of the stimuli by which they are reinforced, and the extent to which they shape their environment to contain differing stimuli that give rise to different behaviors over time—such that individuals vary in personality.

Pause for Reflection

How do you think each of the Big Five can be explained by moderation of stimulus–behavior links?

Controlling Behavior by Controlling Stimuli

According to Skinner, behavior is controlled and modified by variables that are external to the organism. There is nothing inside us—no process, drive, or other internal activity—that can be systematically studied to help explain behavior. However, although these external stimuli and reinforcers are responsible for shaping and controlling behavior, we do have the ability to use what Skinner called self-control, which we will refer to as **behaviorist self-control**—acting to alter the impact of external events. Skinner did not mean acting under the control of some mysterious "self." He suggested that to some extent we can control the external variables that determine our behavior through four self-control techniques:

1. Stimulus avoidance
2. Self-administered satiation
3. Aversive stimulation
4. Self-reinforcement

Stimulus Avoidance

In *stimulus avoidance*, for example, if your roommate is too noisy and interferes with your studying for an exam in the morning, you could leave the room and go to the library, removing yourself from an external variable that is affecting your behavior. By avoiding a person or situation that makes you angry, you reduce the control that person or situation has over your behavior. Similarly, people with alcohol use disorders can not allow liquor to be kept in their homes and can avoid bars.

Research supports the efficacy of these strategies. For example, research indicates that some people remove temptations from choice sets when such stimuli would distract them from their goal, including in performance tasks that required speed and accuracy (e.g., Ent et al., 2015; Tousseart, 2018). People avoided goal-inconsistent stimuli—entertaining stories—in an economics experiment where their goal was to keep track of four-digit numbers and report the last

behaviorist self-control In the behaviorist theory, the ability to exert control over the stimuli that determine our behavior.

number listed to earn money; specifically, they chose ahead of time to forgo reading breaks and to just focus on the task (Tousseart, 2018). In another set of studies, some people avoided attending to distracting or fun stimuli in two contexts. First, in a study where participants had the goal of completing tedious anagrams (i.e., unscrambling word scrambles), some people decided to wait for a distraction-free room instead of using the currently available noisy room (Ent et al., 2015). In a second context, some people avoided distracting pictures of classic and modern artwork on either side of the anagram task and instead chose a more boring standard black-and-white version of an anagram task (Ent et al., 2015). People who more effectively employ this and other self-regulatory strategies have higher "self-control" and tend to be more successful in reaching their goals, which we will discuss further in a subsequent section. Some scholars have even argued that avoidance of distress and painful social emotions drives much effective self-regulation (Inzlict & Legault, 2014).

Self-Administered Satiation and Aversive Stimulation

Through the technique of *self-administered satiation*, we exert control to cure ourselves of some bad habits by overdoing the behavior. According to Skinner's idea here, smokers who want to quit can binge smoke for a period of time, inhaling until they become so disgusted, uncomfortable, or sick that they quit. Creating negative consequences for one's goal-inconsistent behaviors is called the *aversive stimulation* technique of self-control.

Although these self-regulatory strategies may have intuitive appeal, self-administered satiation may not be an effective way to intervene on maladaptive behaviors. For example, early research found that even when people are (food) satiated, presenting them with unhealthy but rewarding food (e.g., pizza, ice cream) still caused increased desire for and consumption of the food, compared to other experimental conditions that presented less appetizing or no food (Cornell et al., 1992). For someone whose goal is to eat more healthfully, binging on unhealthy foods until they are sick might create a short-lived aversion to eating those foods; but it may also cause distress that might be comforted with unhealthy but rewarding food and not be a good long-term solution to self-regulate healthy eating. This highlights one relevant criticism of behaviorism: It leaves out the roles of human attention and motivation, which are very important in rewarding repetitive behaviors, such as unhealthy eating (e.g., Hardman et al., 2021).

Although an individual's creating aversive stimuli for themselves to prevent behavior may not be very effective (like punishment from others), there is some evidence that when society creates aversive stimuli for certain behaviors, they can be reduced. For example, taxing cigarettes so it is more expensive to smoke can encourage people who smoke to reduce consumption or quit, which in turn raises their well-being (Gruber & Mullainathan, 2006).

Self-Reinforcement

In *self-reinforcement*, we reward ourselves for displaying good or desirable behaviors. A teenager who agrees to strive for a certain grade point average or to take care of a younger brother or sister might reward themself by buying concert tickets or new clothes. To Skinner, then, the crucial point is that external variables shape and control behavior. But sometimes, through our own actions, we can modify these external forces.

In research in Norway with people with obesity who had the goal to lose weight and maintain their lower weight, engaging in self-reinforcement was an essential strategy for commitment to the goal and better outcomes (Natvik et al., 2019). In a study of Chinese college students, students who tend to engage in more self-reinforcement via internal self-talk (e.g., would agree with items like "I'm proud of something I've done" and "I want to reinforce myself for doing well") did not perform better on executive functioning or reasoning tasks, but they were lower in anxiety and impulsivity (Ren et al., 2016). For a different sample of college students and younger students between the ages of 11 and 14 in China, individuals who more often engaged in self-reinforcement in the context of learning also reported engaging in more learning strategies, including cognitive strategies (skills to encode, memorize, and recall information), metacognitive strategies (skills to monitor and control cognitive processes), and resource management strategies (controlling external environment and resources). Students high in self-reinforcement also had higher scores in academic math, Chinese, and English (Lee et al., 2020).

Pause for Reflection

Of the behaviorist self-control strategies, which do you think will be most effective? Least effective?

Self-Regulation and Self-Control

The field of psychology has vastly expanded our understanding of self-regulation and self-control.

Self-Regulation

Self-regulation can be understood as people's using a variety of strategies to control their behaviors to be in line with their goals. Self-regulation can be used when people identify a conflict between one of their goals and a behavior in which they might engage.

Think about some of the ideal-based goals that many of us have: We aim to succeed in school and at work, save up money, eat healthfully and exercise, sustain healthy and happy relationships with others, take care of our mental health, and be good, kind, moral people. We can engage in behaviors that support these goals or that conflict with these goals. One individual, let's call them Alex, might aim to run 2 miles five days a week to support their goal of exercise and physical health.

Pause for Reflection

Bring to mind a general goal you have. What behaviors do you want to engage in to support this goal? What behaviors do you want to avoid to support this goal? What strategies do you use to support this goal through goal-consistent behavior?

How can Alex regulate their behaviors in line with that goal? Researchers have proposed a taxonomy of strategies that people employ to regulate their behaviors, largely by reducing temptation to engage in the goal-inconsistent behavior, spanning from ways to intervene before having to control behavior to ways to intervene when facing a conflict with your goal. These strategies or steps include: (1) situation selection, (2) situation modification, (3) attention deployment, (4) cognitive modification, and (5) response modification (Duckworth et al., 2014, 2016; Hennecke & Bürgler, 2020). For example, to make it more likely that they will run 2 miles, Alex may choose to study at the park or the library next to the gym so that they are in a situation that makes it easier to run after they have prepared for the next day's classes. For the definitions, general examples, and examples specific to Alex's goal of running 2 miles five days a week, refer to Table 12.1 (building on Hennecke & Bürgler, 2020).

Pause for Reflection

Now that you know the technical classifications of self-regulatory strategies, which do you think support the goal you thought of earlier?

Self-Control

Some people are better than others at employing these strategies across time and situations. People who are good at employing these strategies are thought to have high self-control. **Self-control** goes beyond just the regulation of behaviors and extends to all aspects of the self: Self-control is the ability to adjust one's feelings, thoughts, and behaviors to be consistent with one's goals.

When understood as an important individual difference or trait, we can understand why people vary in their ability to pursue and reach goals across diverse areas of life.

A large-scale study of American college students found that that those who scored high on a measure of self-control had better grades, higher psychological adjustment scores, and greater self-acceptance and self-esteem (Tangney et al., 2004). People with higher self-control also tend to experience more satisfaction with life, greater happiness, and fewer feelings associated with goal-conflicts (Hofmann et al., 2014). In a study of workplace behavior in the Netherlands, people high, versus low, in self-control exhibited more personal initiative and proactive coping (De Boer et al., 2015).

Self-control supports positive social relationships. People with high self-control tend to have better interpersonal skills and family relationships, as well as lower levels of anger compared to those who scored low on self-control (Tangney et al., 2004). For people whose self-control grew more during adolescence, their romantic relationships were more satisfying and featured less conflict in adulthood, as evidenced by a longitudinal study in Germany (Allemand et al., 2019).

People with higher self-control are physically healthier than those with lower self-control (Moffitt et al., 2011). A big part of this is that self-control supports engagement in health behaviors, from eating well and

self-regulation Various strategies people employ to control their behaviors to be consistent with their goals.

self-control The ability to adjust one's feelings, thoughts, and behaviors to be consistent with one's goals.

Table 12.1 Taxonomy of Self-Regulation Strategies

Strategy	Definition	Types of Sub-Strategies	Examples to Support Goal of Running
Situation selection	Choosing to be in places or with people that facilitate goal-consistent behavior	· Planning ahead of time to avoid certain places · Planning ahead of time to seek out certain places	· Choosing to study at the park or the library next to the gym
Situation modification	Changing the physical or social situation to facilitate goal-consistent behavior	· Changing the environment · Changing the activity itself · Reducing distractions · Seeking social support · Task enrichment	· Running with a friend who likes to run · Choosing a path at the park that is more fun to run
Attention deployment	Selectively attending to aspects of the situation to facilitate goal-consistent behavior	· Adopting a process focus · Distracting oneself from the activity	· Focusing on each step of the run · Listening to a podcast or music while running
Cognitive modification	Thinking about the situation or one's goals in a way to facilitate goal-consistent behavior	· Anticipating self-reward · Focusing on negative consequence · Focusing on positive consequences · Setting and checking on goals · Self-talk · Cognitive reappraisal	· Rewarding oneself with a bubble bath after the run · Focusing on the health benefits of running
Response modification	Attempt to stop or change goal-inconsistent behavior to facilitate goal-consistent behavior	· Suppressing impulse to engage in goal-inconsistent behavior · Stopping goal-inconsistent behavior through inhibition · Initiating goal-consistent behavior through effort	· Inhibiting desire to stop running · Initiating each step of the run
Emotion regulation	Working to change feelings to facilitate goal-consistent behavior	· Emotion reappraisal · Emotion suppression	· Reinterpreting negative feelings as evidence of hard work · Creating a good mood by thinking about what you're grateful for

exercising, to going to the doctor and sticking with health plans and medication, and resisting substance dependence (Moffit et al., 2011). In one study, adolescents in the United States with diabetes with higher self-control had healthier mean daily blood glucose levels, and this was not only due to their health behaviors but also because they managed their negative emotions better (Lansing et al., 2016).

People with higher versus lower self-control are better able to manage their social media use in healthy ways. For example, compared to people with higher self-control, people with lower self-control use Facebook more frequently and use it to manage their reputations and in maladaptive ways (e.g., comparing themselves to others and feeling upset by a lack of attention) (Maranges et al., 2023).

Self-control is also associated with other-focused, cooperative, and prosocial behavior. In the context of the workplace in the Netherlands, people higher in self-control engaged in more organizational citizenship behavior on average (De Boer et al., 2015). People higher in self-control are also less likely to engage in criminal offending than are people lower in self-control (Moffitt et al., 2011).

Given these findings, it is unsurprising that low self-control is a risk factor for social isolation and loneliness, as evidenced by a study in the Netherlands using cross-sectional, experimental, daily diary, and experience sampling methods (Stavrova et al., 2022).

People with higher self-control likely reach these goals because they enact various strategies of self-regulation until the goal-consistent behavior becomes automatized

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Self-control is the ability to modify one's thoughts, feelings, and behaviors to support one's goals. People vary in this trait, with some having higher and some having lower self-control.

(i.e., happens more automatically) through habits and routines (De Ridder & Gillebaart, 2017). These skills can be learned over time (Oaten & Cheng, 2006), which is likely one contributor to the increase in self-control over development (e.g., Allemand et al., 2019). Self-control is one of the most important traits in predicting behavior across time and situations.

Pause for Reflection

Think about a goal that's very important to you. How do you use self-control to work toward accomplishing that goal?

Assessment in Skinner's Theory

Skinner's assessment methods differ radically from those used by other theorists we have discussed. His research methods also diverged from mainstream experimental psychology. The usual procedure is to study large groups of animal or human subjects and to statistically compare their average responses. In contrast, Skinner preferred the intensive study of a single subject. He argued that data on the average performance of groups is of little value in dealing with a particular case or focusing on a particular process by which a behavior is learned.

functional analysis An approach to the study of behavior that involves assessing the frequency of a behavior, the situation in which it occurs, and the reinforcers associated with it.

Skinner believed that valid and replicable results could be obtained without statistical analysis as long as sufficient data were collected from a single subject under well-controlled experimental conditions. Skinner argued that the use of large groups of subjects forced the experimenter to deal with average behavior. The resulting data could not reflect individual response behavior and individual differences in behavior.

Skinner and his followers conducted thousands of operant-conditioning experiments on topics such as reinforcement schedules, language acquisition, behavior shaping, superstitious behavior, and behavior modification. The results have been highly supportive of Skinner's ideas.

Functional Analysis

In the application of his behavior-modification techniques, it is necessary to first assess specific behaviors, both goal-consistent and inconsistent. It is also important to assess the environmental factors that serve as reinforcers and that can be manipulated to alter behavior. No behavior can be modified appropriately without such prior assessment. Skinner's approach to assessing behavior is called **functional analysis**, and it involves three factors associated with the behavior:

1. The frequency of the behavior
2. The situation in which the behavior occurs
3. The reinforcement associated with the behavior

Unless these factors have been evaluated, it is not possible to plan and implement a behavior modification program. Consider a functional analysis for people who smoke cigarettes and want to break the smoking habit. These individuals are asked to keep an accurate record of the number of cigarettes they smoke each day and the situations in which they smoke. Does smoking occur in a particular place or at a certain time? In the presence of others or when alone? After meals or while driving? And what are the reinforcers? Most people who smoke do so more frequently in the presence of certain stimuli. Identifying these stimuli is necessary because modifying the stimuli should lead to a change in smoking behavior. Three approaches to assessing behavior via functional analysis are direct observation, self-reports, and physiological measurements.

Direct Observation of Behavior

Many behaviors can be assessed through direct observation. Usually, two or more people conduct the observation to ensure accuracy and reliability. For example, in a classic report of a behavior modification situation, a woman sought treatment for her 4-year-old

son whose behavior was maladaptive (Hawkins et al., 1966). Two psychologists observed the mother and child in their home to evaluate the nature and frequency of the child's undesirable behaviors, when and where they occurred, and the reinforcers the child received for the behaviors.

Nine maladaptive behaviors were identified, including kicking, throwing things, biting, and pushing a sibling. The psychologists observed that the mother reinforced the child by giving him toys or food when he behaved badly. Her intention was to get him to stop misbehaving. Instead, she was rewarding him and thus reinforcing the behavior. The direct observation assessment lasted 16 hours, but without it the psychologists would not have known exactly which behaviors to try to eliminate or what reinforcers the child expected.

With a comprehensive direct-observation program, it is possible to plan a course of behavior modification. In this case, the psychologists instructed the mother to use attention and approval as reinforcers when the child behaved in positive ways and never to reward him when he displayed one of the nine observed maladaptive behaviors. The frequency of the undesirable behaviors, as determined in the direct observation assessment, provided a baseline against which to compare behavior during and after treatment.

Modern scholars argue that functional assessments of behavior are one key to understanding the contributors to and designing an intervention for preschoolers' maladaptive behaviors, which predict later academic adjustment and behavioral problems (McIntyre & Golya, 2016). Functional analysis and observation of behavior may also be ideal for guiding clinical treatment for negative symptoms of schizophrenia, such as blunted affect, alogia (lack of speech), lack of sociality, anhedonia (a lack of enjoyment), and apathy (Lincoln et al., 2017). This approach can even be adapted to use videoconferencing to observe behavior, as in the case of one study in the United States with children with autism spectrum disorder (Machalicek et al., 2009).

Self-Reports of Behavior

Another approach to assessing behavior is the self-report technique carried out through interviews and questionnaires. The person observes their own behavior and reports on it. Questionnaires for assessing behavior are similar in format to self-report inventories that assess personality. Notably, this approach works better with adults than children, given that adults are more likely to be able to remember their own behaviors, and read, write, and check their own self-report biases. Self-report measures have been used in many contexts for behavior assessment before behavioral intervention, including of care-recipient's behavior and caregiver's outcomes in Spain (Márquez-González et al., 2020), of people diagnosed with gambling disorder in Sweden (Molander et al., 2022), and of people with binge eating tendencies in Australia (Burton & Abbott, 2019).

Physiological Measurements of Behavior

Physiological assessments of behavior include subtle physical movements, heart rate, muscle tension, and brain waves. Because physiological processes are occurring "under the surface" and cannot be recorded by mere behavioral observation, physiological measurements go beyond the original tenets of behaviorism. By recording such measurements, it is possible to evaluate the physiological effects of various stimuli. The measures can also be used to confirm the accuracy of information obtained by other assessment methods.

For example, people evince stronger physiological responses to stimuli that represent a physical threat than to stimuli that are nonthreatening-negative, positive, or neutral as evidenced by work using the startle-eyeblink measure—a rapid, defensively reflexive closing of the eyes (March et al., 2017). Similar results of threat-superiority were found using other measures: The same work noted that people were faster to detect and orient their initial gaze more frequently toward threatening images. Following up on that work, those researchers found that people preferentially respond physiologically to threatening stimuli even when those stimuli are below the level of conscious awareness and presented subliminally. Not only did people again react to threatening images with stronger startle-eyeblink but also with stronger skin-conductance—a measure of nervous system arousal (activation) evidenced as an increasing amount of sweat on the palm of the hand that eases the transmission of electricity between two electrodes (March et al., 2022). Across these works, the authors make the point that humans prioritize the processing and response to stimuli that are potentially physically harmful, consistent with the behaviorist contention that our behavior is a response to stimuli. Other applications include using physiological measures as part of assessing athletes before intervention (Hossner et al., 2015).

Whatever assessment technique is chosen to assess behavior in different stimulus situations, the focus remains on what people do, not on what might have motivated them to do it. The ultimate goal is to modify behavior, thereby changing personality.

Pause for Reflection

What assessment strategies are best for studying behavior? What about personality as assessed by other theories such as the five-factor or humanistic views? Why might these answers differ by theory?

Questions About Human Nature

Skinner's position is clear on the nature–nurture issue. People are primarily products of learning, shaped more by external variables than genetic factors. (However, note that modern behaviorists think about genes as external stimuli alongside the environment, e.g., Harrington et al., 2001). We may infer that childhood experiences are more important in Skinner's theory than are later experiences because our basic behaviors are formed in childhood. However, this does not mean that behavior cannot change in adulthood.

What is learned in childhood can be modified, and new behavior patterns can be acquired at any age. The success of behavior modification programs verifies that assertion. Skinner's belief that behavior is shaped by learning also leads us to conclude that each person is unique. Because we are shaped by experience—and we all have different experiences, particularly in childhood—no two people will behave in precisely the same way.

Skinner did not address the issue of an ultimate and necessary goal. He made no reference to overcoming inferiority, reducing anxiety, or striving for self-actualization. Such motives assume internal, subjective states, which Skinner did not merit as worth study or of primary importance in what drives behavior.

On the issue of free will versus determinism, Skinner believed people function like machines, in lawful, orderly, predetermined ways. He rejected the necessity of an inner being or autonomous self that determines a course of action or chooses to act freely and spontaneously to describe humans.

From Skinner's scholarly writings to his popular novel about a utopian society based on operant conditioning, his message is the same: Behavior is controlled by reinforcers. Are we left, then, with a pessimistic conception of people as helpless and passive robots, unable to play any active role in determining their behavior? That is not Skinner's complete view. Despite his belief that behavior is controlled by external stimuli and reinforcers, we are certainly not victims. Although controlled by our environment, we are responsible for designing that environment by using self-control to modulate the stimuli around us.

Our buildings, cities, consumer goods, factories, media, and government institutions are the result of human fabrication. So, too, are our social systems, languages, laws, customs, and recreations. We constantly change our environment, often to our advantage. When we do so, we are acting as both controller and controlled. We design the controlling culture, and we are products of that culture. "We may not be free agents," he wrote, "but we can do something about our lives, if we would only rearrange the controls that influence our behavior. . . . I am not trying to change people. All I want to do is change the world in which they live" (quoted in Bjork, 1993, pp. 16, 233).

Reflections on Skinner's Theory

Skinner's approach has been criticized on several points. Those who oppose determinism find much to dislike in Skinner's views. Humanistic psychologists, who believe that people are more complex than machines or rats or pigeons, object to Skinner's image of human nature. They argue that the exclusive emphasis on overt behavior ignores unique human qualities such as conscious free will.

There has been criticism of the type of subject and the simplicity of the situations in Skinner's experiments. He made broad assertions and predictions about human behavior and society—about social, economic, religious, and cultural issues—with considerable confidence. But, some critics ask, can we extrapolate from a pigeon pecking at a disc to a person functioning in the real world? The gap seems too vast to permit broad generalizations. Many aspects of human behavior cannot be reduced meaningfully to the level at which Skinner conducted his research. However, much research since Skinner made these contentions supports them in various domains: Human behavior is conditioned behavior.

However, Skinner's position that all behaviors are learned was challenged by two of his former students who conditioned more than 6,000 animals of 38 different species to perform for television commercials and tourist attractions. The animals included pigs, raccoons, chickens, hamsters, porpoises, whales, and cows. The animals displayed a tendency toward

instinctive drift by substituting instinctive behaviors for the behaviors that had been reinforced, even when the instinctive behaviors interfered with receiving food.

In one example, pigs and raccoons were conditioned to pick up a coin, carry it some distance, and deposit it in a toy bank (a piggy bank, of course). When the animals had deposited a certain number of coins, they were given food as a reinforcer. They learned the desired behaviors quickly,

> but after having performed the sequence nicely for some time, they began to engage in undesirable behaviors, at least from the viewpoint of the trainers. Pigs would stop on their way [to the bank], bury the coin in the sand, and take it out with their snout; raccoons would spend a lot of time handling the coin, with their well-known washing-like movements. This was at first amusing, but eventually it became time-consuming and would make the whole show appear very imperfect to the spectator. Commercially, it was a disaster. (Richelle, 1993, p. 68)

Instinctive behavior, such as the pigs' rooting in the dirt and the raccoons' rubbing their paws as if washing their hands, came to take precedence over the learned behavior, even though it meant a delay in receiving the reinforcement (the food). The trainers published an article on the phenomenon called "The Misbehavior of Organisms" (Breland & Breland, 1961). This was a parody of the title of Skinner's groundbreaking book, *The Behavior of Organisms* (1938), and it reportedly left Skinner feeling displeased (Gillaspy, 2009).

Skinner ignored most of the criticisms of his work. He told an interviewer about one critic's book review, "I read a bit of it and saw that he missed the point. . . . There are better things to do with my time than clear up their misunderstandings" (quoted in Rice, 1968). When asked how he dealt with being misunderstood so frequently, he said, "I find that I need to be understood only three or four times a year" (quoted in Blackman, 1995, p. 126).

Skinner was a potent force in 20th-century American psychology. He shaped the field perhaps more than any other individual. The *Journal of the Experimental Analysis of Behavior,* begun in 1958, publishes research on the behavior of individual subjects. In 1968, the *Journal of Applied Behavior Analysis* was established as an outlet for work on behavior-modification techniques.

The American Psychological Foundation awarded Skinner its Gold Medal, and the American Psychological Association gave him the Distinguished Scientific Contribution Award (1958). The citation reads: "Few American psychologists have had so profound an impact on the development of psychology and on promising younger psychologists."

Skinner's first book on behaviorism, *The Behavior of Organisms: An Experimental Analysis* (Skinner, 1938), was described as one of the few books to truly change the nature of the field (Thompson, 1988). Skinner also received the U.S. National Medal of Science and appeared on the cover of *Time*, headlined as the world's most famous American psychologist. His controversial 1971 book, *Beyond Freedom and Dignity,* became a best seller and made him a celebrity.

> Skinner was, for a short period, the hottest item on national and big-city talk shows. . . . Within a month, millions of Americans had read or heard about B. F. Skinner and *Beyond Freedom and Dignity*. He was "completely swamped by mail, telephone calls, and visits. . . . Strangers often asked to shake his hand in restaurants. He had, as one writer noted, "acquired the celebrity of a movie or TV star." (Bjork, 1993, p. 192)

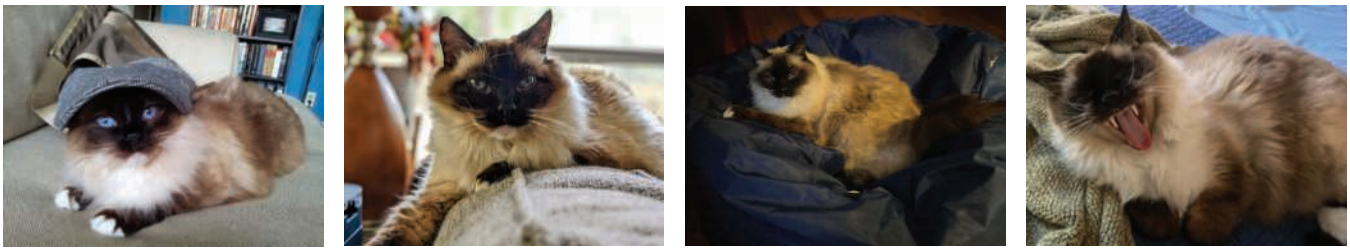
Although Skinner's radical behaviorist position continues to be applied in laboratory, clinical, and organizational settings, its dominance has been challenged by the cognitive movement in psychology, which began in the 1960s. Skinner conceded that his form of psychology lost ground to the cognitive approach. Other psychologists agreed, noting that Skinnerian behaviorism had "fallen from favor among the majority of active workers in the field [and was] often referred to in the past tense" (Baars, 1986, pp. viii, 1). Modern behaviorists, however, argue that Skinner's theories can serve as a metatheoretical framework that describes how people behave in response to stimuli, leaving room for complementing affective or cognitive accounts of mediating processes (e.g., Perugini et al., 2016).

Despite the inroads of cognitive psychology, however, Skinner's position remains influential in many areas, from classrooms to assembly lines, from Skinner boxes to treatment programs for disorders characterized by maladaptive behaviors. Skinner believed that with operant conditioning he offered a technique to improve human nature and the societies people design.

Pause for Reflection

Do you think there are other strengths or weaknesses of Skinner's theory not discussed here?

instinctive drift The substitution of instinctive behaviors for behaviors that had been reinforced.



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Animals' and humans' behavior can be reinforced. Thomas Whomas March, or just Tom the Cat, was trained to wear hats, pose for photos, and use a bean bag as a cat bed via positive reinforcement and rewards (e.g., pets, brushes, and affection). Tom's humans tried to train him not to roar like a lion at them, but they used negative reinforcement (e.g., saying, "That's a no!" until he stopped) or punishment (e.g., meowing loudly at him whenever he did it), and that was ineffective. You might even think that Tom trained his humans.

DEI Spotlight

Skinner's Theory and Diversity, Equity, and Inclusion

Skinner's theory focuses on how behavior is a response to our environment, namely to stimuli that serve to reinforce our behavior, and posits that we can modulate those stimuli through self-control. Research on self-control has extended beyond the behaviorist theory. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individuals, Families, and Society. B. F. Skinner acknowledged that we can change our behavior by changing the stimuli in our environments that reinforce our behavior. Much work has been done to go beyond that conception of self-control to understand the various self-regulatory strategies people use and variation in individuals' self-control in accomplishing their goals. But all is not equal when it comes to self-control.

Research suggests that self-control development is facilitated by having the economic resources to ensure all basic needs are met and to procure more advanced education (Adamkovič & Martončik, 2017). Self-control is applied to control thoughts, feelings, and behavior to work toward a future goal. If you do not have enough food to eat, are worried about paying rent to keep a roof over your head, or don't get higher education (that largely features lessons in self-regulatory strategies), you may not have the personal cognitive energy to modify the processes of the self or may not be thinking about future goals—in this way, self-control development is a privilege.

This has negative implications for people whose families have low incomes, and especially for people of color and who live in rural communities in which higher education (i.e., college and beyond) are not the default. In the United States, two out of every five children (40 percent) are in poverty (20 percent) or near poverty (20 percent). For Black young people, this rate is higher, with about 50 percent of children being in poverty, not even counting those close to poverty. Even higher rates exist for Black children living in rural communities in the U.S. South, where at least 60 percent live in poverty (DeNavas-Walt & Proctor, 2014). Furthermore, most Black people in the rural South do not go to college and receive bachelor's degrees, making the transition to the workforce more difficult and largely driven by personal initiative, which self-control supports (Brody et al., 2012). Thus, in addition to intervening on poverty itself, it is crucial to support the self-control of people whose families have fewer resources, especially as that sociodemographic status intersects with Black identity and rural communities.

This was the goal of one group of researchers (Brody et al., 2020), who studied the results of an intervention that supported children's self-control by supporting parent's interactions with their children. They took this approach because supportive, warm but firmly applying rules, parenting facilitates the development of self-control, because parents are both reinforcing and modeling good self-control (we will discuss observational learning and modeling in the next chapter) (Brody et al., 2012; Morris et al., 2017).

In the Strong African American Families (SAAF) program, nearly 400 families (parents and 11-year-old children) attended multiple meetings that had separate one-hour instructional

DEI Spotlight, continued

Skinner's Theory and Diversity, Equity, and Inclusion

sessions with Black group leaders. Parents learned about supportive parenting, including providing warm and responsive parenting, communicating well, and being emotionally supportive. Children's sessions focused on the importance of abiding by home rules and of making goals in life and plans to meet those goals. The study followed the progress of the parents and the children for 14 years, until the children were 25 years old.

The researchers found that children whose families had participated in the SAAF program had better outcomes, namely higher employment income and lower likelihood of being in poverty, especially for children who started the program with lower self-control, compared to children in a control group.

This work highlights the impact of the intersection of economic class and rural dwelling, especially for Black children, on self-control and economic resources. In addition to intervening on poverty, interventions should support children's self-control. Supporting parents and how they interact with their children is an ideal way to do this. Skinner would likely highlight that the parents provided ideal reinforcement, namely reward, in the home environment to encourage self-controlled behaviors, which in turn provided people with more personal resources to manage their harsh environments.

Chapter Summary

Skinner did not seek causes of behavior within the organism, including internal personality. Mental and physiological processes are not overtly observable, so they have no relevance for science, he argued. The causes of behavior are external to the organism. Behavior can be controlled by its consequences, by the reinforcer that follows the behavior. Respondent behavior involves a response elicited by specific environmental stimuli. Conditioning behavior involves substituting one stimulus for another and leads to respondent behavior that is learned.

Conditioning will not occur without reinforcement. Operant behavior is emitted and is determined and modified by the reinforcer that follows it. Personality can be thought about as a pattern of operant behaviors resulting from a unique history of reinforcers or in terms of individual differences in how stimuli are linked to behavior. Personality differences may result from differences in people's behavioral response frequency to the same stimuli, reinforcement by different kinds of stimuli, reinforcement timing, and the shaping of their environment to contain differing stimuli that give rise to different behaviors over time.

Reinforcement schedules include fixed interval, fixed ratio, variable interval, and variable ratio. Shaping (successive approximation) involves reinforcing the organism only as its behavior becomes inceasingly similar to the behavior desired. Superstitious behavior results from behaviors being accidentally reinforced, with people developing the belief that the behavior will result in the same positive outcome in the future.

Behavior modification applies operant conditioning techniques to real-world problems. Healthy behaviors are positively reinforced; maladaptive behaviors are ignored. The token-economy approach rewards desirable behaviors with tokens that can be used to acquire objects or activities of value. Behavior modification deals only with overt behavior and uses positive reinforcement, not punishment, which is applying an aversive stimulus when the undesired behavior is emitted. Negative reinforcement involves removing an aversive or noxious stimulus. Punishment and negative reinforcement are less effective than positive reinforcement and can even have unintended, problematic consequences.

In the behaviorist tradition, self-control of behavior refers to altering or avoiding certain external stimuli and reinforcers and includes other techniques of satiation, aversive stimulation, and self-reinforcement for displaying desirable behaviors. Theory and research have moved beyond that conception to describe other self-regulatory strategies and understand self-control as an ability that varies in people like a personality trait. Self-control is the ability to modify your thoughts, feelings, and behaviors, to be in line with your goals.

Skinner assessed behavior (not personality) using functional analyses to determine the frequency of the behavior, the situation in which the behavior

occurred, and the reinforcers associated with the behavior. Three ways to assess behavior are direct observation, self-report, and physiological measures. These research strategies have been applied to a wide variety of contexts.

Skinner's theory of human nature emphasizes determinism, uniqueness, the importance of the environment, and the design of a society that maximizes the opportunity for survival. Although people are controlled by the environment, they can exert control by designing that environment to elicit healthier responses.

Skinner's system has considerable empirical support but has been criticized for its deterministic view, the simplicity of the experimental situations, the lack of interest in behavior other than response rate, and the failure to consider human qualities that set us apart from rats and pigeons, such as those of cognition, emotions, and motivation.

Review Questions

1. In what ways does Skinner's approach to personality differ from other approaches we have discussed?
2. How did Skinner's childhood experiences influence his later approach to studying behavior?
3. Describe operant conditioning.
4. Compare and contrast positive reinforcement, negative reinforcement, and punishment.
5. Outline the four schedules of reinforcement.
6. Explain how a complex behavior such as learning to speak is acquired through successive approximation.
7. How does the notion of reinforcement account for the acquisition of superstitious behaviors?
8. List four applications of operant conditioning, covering both token economy programs and behavior modification programs.
9. Explain how principles of behaviorism can help describe personality in 6–10 sentences.
10. Define behaviorist self-control and four strategies of controlling stimuli to control behavior.
11. Discuss how self-regulatory strategies and self-control are related.
12. Summarize three research findings that link self-control to positive life outcomes.
13. Describe the strengths and weaknesses of methods of direct observation, self-report, and physiological measurements of behavior.

Suggested Readings

- Antony, M., & Roemer, L. (2011). *Behavior therapy.* American Psychological Association. A readable and concise overview of the history and nature of behavior therapy, focusing on both the theoretical and practical aspects.
- Baumeister, R., & Tierney, J. (2012). *Willpower: Rediscovery of the greatest human strength.* Penguin. Covers the current status of self-control in psychology and in daily life—how to achieve and strengthen it; reviews the extensive research on the topic as well as real-world applications.
- Miltenberger, R. (2015). *Behavior modification: Principles and procedures* (6th ed.). Cengage. A textbook on behavior modification and the wide range of applications in everyday situations; everything you might need to know about behavior modification and how to use it!
- Nye, R. D. (1992). *The legacy of B. F. Skinner: Concepts and perspectives, controversies and misunderstandings.* Brooks/Cole. A primer on Skinner's basic concepts and their relevance for behavior in today's world. Examines controversies and misunderstandings surrounding Skinner's views and compares his system with those of Freud and Rogers.
- O'Donohue, W., & Ferguson, K. E. (2001). *The psychology of B. F. Skinner*. Sage. Presents a clearly written and balanced look at the controversies surrounding Skinner's work on behaviorism, cognition, verbal behavior, and applied behavior analysis. Includes Skinner's ideas for improving society as a whole, as well as a brief biography.
- Pryor, K. (2006). *Don't shoot the dog: The new art of teaching and training.* (3rd ed.). Ringpress Books. Shows the practical value of behavior-modification techniques in teaching dogs, children, students, and employees.
- Skinner, B. F. (1948). *Walden two.* New York: Macmillan. Skinner's novel about human values and conduct in a utopian society based on behaviorist principles.
- Skinner, B. F. (1976). *Particulars of my life; (1979). The shaping of a behaviorist; (1983). A matter of consequences.* Alfred A. Knopf. Skinner's three-volume autobiography.
- Skinner, B. F. (1987). *Upon further reflection*. Prentice-Hall. Essays on cognitive psychology, verbal behavior, education, and self-management in old age.

Part 8

The Social-Learning Approach

The social-learning approach to personality, represented here by the work of Albert Bandura, is an outgrowth of and rebellion against Skinner's behaviorist approach. Like Skinner, Bandura focused on overt behavior rather than on inner needs, traits, drives, or defense mechanisms. Unlike Skinner, Bandura allowed for internal cognitive variables that mediate between stimulus and response. For Bandura, the organism is not empty.

Bandura investigated cognitive variables with a high degree of experimental sophistication and rigor, drawing inferences from careful observations of behavior in the laboratory. He observed the behavior of people in social settings, whereas Skinner dealt with animals in individual settings. Bandura agreed with Skinner that behavior is learned and that reinforcement is vital to learning, but he differed from Skinner in his interpretation of the nature of reinforcement.

Bandura and Skinner both attempted to understand personality through laboratory research rather than clinical work, but their principles have been widely applied in the clinical setting through behavior-modification techniques. Because Bandura used cognitive variables, his work reflected and reinforced the cognitive movement in psychology. His approach has also been called *cognitive-behavioral* in recognition of this emphasis.

Chapter 13

Virtually every phenomenon that occurs by direct experience can occur vicariously as well—by observing other people and the consequences for them. —Albert Bandura

Albert Bandura: Modeling Theory

Learning Objectives

13.1 Compare and contrast Bandura's theory with that of psychoanalysts, developmental stage theorists, and humanists, providing two examples of similarities and differences for each.

13.2 Define modeling and observational learning.

13.3 Identify negative and positive results of observational learning.

13.4 Describe the cognitive processes in social learning: attentional, retention, production, and motivational processes.

13.5 List three strategies of self-reinforcement.

13.6 Explain the role of self-efficacy in facilitating productive behavior.

13.7 Outline the developmental trajectory of self-efficacy across the life span.

13.8 Compare and contrast the behavior modification strategies used in modeling therapy: modeling, guided participation, and covert modeling.

13.9 Summarize Bandura's theory of personality (behavior) in five sentences.

Bandura agreed with Skinner that behavior is learned, but with that point their similarity ends. Bandura criticized Skinner's emphasis on individual animal subjects rather than on human participants interacting with one another. Bandura's approach is a social-learning theory that investigates behavior as it is formed and modified in a social context. He argued that we cannot expect data from experiments that involve no social interaction to be relevant to most people, who encounter other people most days and throughout their lives.

Vicarious Reinforcement

Although Bandura agreed with Skinner that much learning takes place as a result of reinforcement, he also stressed that virtually all forms of behavior can be learned without directly experiencing any reinforcement. Bandura's approach is also called **observational learning**, indicating the importance of observing other people's behavior when it comes to the learning process.

Rather than experiencing reinforcement ourselves for each of our actions, we learn through **vicarious reinforcement**: We learn by observing the behavior of other people and the consequences of that behavior. This focus on learning by observation or example, rather than always by direct reinforcement, is a distinctive feature of Bandura's theory.

The Role of Cognitive Processes

Another feature of Bandura's observational-learning approach is its treatment of internal cognitive or thought processes. Unlike Skinner, Bandura believed that because cognitive processes can influence observational learning, they are worth empirical study. We do not always or only automatically imitate the behaviors we see other people displaying. Rather, we often make a deliberate, conscious decision to behave in the same way. To learn through example and vicarious reinforcement, we must be capable of anticipating and appreciating the consequences of the behaviors we observe.

We can regulate and guide our behavior by visualizing or imagining those consequences, even though we have not experienced them ourselves. No direct link exists between stimulus and response or between behavior and reinforcer, as Skinner proposed. Instead, our cognitive processes mediate between the two.

A Less Extreme Form of Behaviorism

Bandura presented a less extreme form of behaviorism than Skinner. He emphasized the observation of others as a means of learning, and he considered learning to be mediated by cognitive processes. His theory is based on rigorous laboratory research with people in social interaction rather than a rat in a cage or a therapy client on a couch.

Patrick Foto/Shutterstock

Bandura's theory of observational (or social) learning suggests that we learn by watching and copying others' behaviors.

The Life of Bandura (1925–2021)

Choosing an Education

Bandura was born in the province of Alberta, Canada, in a town so small that his high school had only two teachers and 20 students. His parents were immigrants from Poland who emphasized the value of education. "You have a choice," his mother told him when he was young. "You can work in the field and get drunk in the beer parlor, or you might get an education" (quoted in Foster, 2007, p. 3). He chose education.

During the summer following his graduation from high school, he took a construction job in the wilderness of the Yukon Territory, filling holes in the Alaska Highway. It was a unique experience for a bright, inquisitive young person.

> Finding himself in the midst of a curious collection of characters, most of whom had fled creditors, alimony, and probation officers, Bandura quickly developed a keen appreciation for the psychopathology of everyday life, which seemed to blossom in the austere tundra. (Bandura, 1981, p. 28)

Finding Psychology

Bandura went to the University of British Columbia in Vancouver as an undergraduate and took a course in psychology out of expediency. The carpool in

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observational learning Learning new behaviors by observing the behavior of other people.

vicarious reinforcement Learning or changing a behavior by observing the consequences of the behaviors of others, rather than experiencing the reinforcement directly.

which he commuted to the campus every day included engineering and pre-med students, all of whom had early-morning classes. Psychology was also offered in the early morning so Bandura enrolled in the course, not out of any real interest, but simply because it was a convenient time. He ended up finding the material fascinating, committed himself to studying psychology, and went on to earn his PhD in psychology in 1952 from the University of Iowa.

After a year at the Wichita, Kansas Guidance Center, he joined the faculty of Stanford University, where he began his new approach to psychology. Challenging the dominant theory in the field (Skinner's behaviorism) was a risky undertaking for a young, unknown psychologist. "When I began my career, more than half a century ago," he wrote in 2011, "behaviorism had a stranglehold on the field of psychology. . . . It was in this inhospitable conceptual climate that I launched a program of research on the determinants of observational learning" (Bandura, 2011).

He became very successful and compiled an extensive record of publications. In 1973, only 21 years after getting his PhD, he was elected president of the American Psychological Association. In 1980, he received its Distinguished Scientific Contribution Award and in 2006 was presented with the American Psychological Foundation's Gold Medal Award for Life Achievement.

Bandura was known for his sense of humor, which had often been directed at himself. When he was once asked whether he walked to his office every day or drove his car, he said, "Both, sometimes in the same day." Having driven to work, he would become so absorbed in his ideas that he would absentmindedly walk home, leaving his car in the university parking lot.

Modeling: The Basis of Observational Learning

Bandura's basic idea is that learning can occur through observation or example rather than solely by direct reinforcement. Bandura did not deny the importance of direct reinforcement as a way to influence behavior, but he challenged the notion that behavior can be learned or changed *only* through direct reinforcement. He argued that operant conditioning, in which trial-and-error behavior continues until the person happens upon the correct response, is an inefficient and potentially dangerous way to learn certain skills such as swimming or driving.

A person could drown or crash before finding the correct sequence of behaviors that brings positive reinforcement. Instead, to Bandura, most human behavior is learned through example, either intentionally or accidentally. We learn a wide and varied range of

Courtesy of Dr. Albert Bandura, Stanford University

In the Bobo doll studies, children exhibited aggressive behavior toward the doll after observing an aggressive model do so.

behaviors in our daily lives by simply observing other people and patterning our behavior after theirs, as evidenced by research done by diverse psychologists (Gaskins & Paradise, 2010; Oates, 2012).

Bandura's Early Research on Modeling

Through **modeling**, by observing the behavior of a model and repeating the behavior ourselves, it is possible to acquire responses that we have never performed or displayed before and to strengthen or weaken existing responses. Bandura's now-classic demonstration of modeling involves the Bobo doll, an inflatable plastic clown figure about 4 feet tall (Bandura et al., 1963).

In Bandura's studies, preschool children watched an adult hit and kick Bobo. While attacking the doll, the adult model shouted, "Sock him in the nose!" and "Throw him in the air!" When the children were left alone with the doll, they modeled their behavior after the example they had just witnessed. Their behavior was compared with that of a control group of children who had not seen the model attack the Bobo doll. The experimental group was found to be twice as aggressive as the control group.

The intensity of the aggressive behavior remained the same in the experimental participants whether the model was seen live, on television, or as a cartoon character. The effect of the model in all three media was to elicit aggressive behavior that was not displayed with the same strength by children who had not seen the models.

In another study on the impact of modeling on learning, Bandura compared the behavior of parents of two groups of children (Bandura & Walters, 1963). One group consisted of children who exhibited aggressive behavior, the other of children who did not evince such behavior. According to Bandura's theory, the children's behavior would likely reflect their parents' behavior. The research found that the parents of the nonaggressive children were nonaggressive, and the parents of the aggressive children were aggressive. Bandura interpreted this finding to mean that children had modeled their behavior on the examples provided by their parents.

These findings may seem obvious to you, but when Skinner's theory was the primary one in psychology, researchers would not have predicted this. It is likely due to Bandura's work and that of other scientists clearly demonstrating the effect of modeling that the concept made its way into mainstream psychology and culture.

This work highlights that when it comes to assessment, like Skinner, Bandura focused on overt behavior rather than on internal motivating variables. He did not use assessment measures such as free association, dream analysis, or projective techniques. Unlike Skinner, Bandura accepted the operation of cognitive variables. It is these cognitive variables, as well as behavior, that can be assessed.

Pause for Reflection

How might you extend Bandura's studies to research modeling that is relevant to today's world?

Disinhibition: The Dark Side of Observational Learning

Bandura's research has demonstrated that behaviors a person usually suppresses or inhibits may be performed more readily under the influence of a model (Bandura, 1973, 1986). This phenomenon, called **disinhibition**, refers to the weakening of an inhibition or restraint through exposure to a model.

Pause for Reflection

Can you think of examples of behaviors that people might only engage in when others are modeling that behavior?

Much research has been conducted to understand how observation of a model engaging in social norm-breaking, rule-breaking, antisocial, or maladaptive behaviors can shape subsequent behavior and, thus, personality.

Early research on disinhibition suggests that it can influence behaviors as subtle as eye gaze in the context of sexualized stimuli. American men in college were shown a film that contained erotic pictures of nude male and female people (Walters et al., 1963). The students were led to believe that others in the study had either looked at or avoided looking at the naked bodies of the people in the pictures by showing them different movement of a spot of light over the film that represented the other participant's gaze. Measuring the participants' eye gazes, the researchers found that the men

modeling A process of learning by which an individual observes another person engage in a behavior and then copies that behavior.

disinhibition The weakening of inhibitions or constraints by observing the behavior of a model.

were more likely to look directly at the nude people in the pictures if they were exposed to the purported participant's gaze on those pictures than if they were exposed to a gaze that avoided them.

Bandura was an outspoken critic of the type of society that provides the wrong models for its children. One primary source of modeled behaviors is parents and family of children. Children whose parents hit them are more likely to hit their parents (e.g., Contreras & del Carmen Cano, 2016). More recent research suggests that children can and will pick up on and emulate social group biases from subtle nonverbal behaviors that are directed toward members of those social groups (Skinner et al., 2020).

Some have been particularly critical of the examples of violent behavior that are standard fare on television, movies, and video games. Bandura's research clearly demonstrates the effect of models on behavior. If what we observe is what we become, then the distance between observing an aggressive character and committing a violent act ourselves is not very great, by his view.

Bandura and researchers in many countries have demonstrated convincingly that in laboratory situations and in the real world, witnessing violence begets violence, whether on television or computer screens, movies, or video games, or in homes, streets, and schools (Elson & Ferguson, 2014). There seems to be consensus on this: In a survey of nearly 800 American media psychologists and mass communication scientists, pediatricians, and parents, respondents agree that violent media (i.e., comic books, internet sites, literature, movies, music, music videos, sports, TV programs, video games) increase aggression in children (Bushman et al., 2015). The evidence on the effects of the exposure to violence in the media or in person is so strong that the U.S. Surgeon General, the National Institute of Mental Health, the American Psychological Association, the American Medical Association, and the American Psychiatric Association agree that exposure to violence is a significant risk factor in producing violence in those who witness it (Pozios et al., 2013).

Pause for Reflection
Why do you think disinhibition occurs?

Observational Learning Online

The internet provides a space in which people can observe others engaging in antisocial behavior with relative impunity (without receiving negative reinforcement or punishment) and often with positive reinforcement, such as social reward. According to Bandura's theory, this type of situation would lead to more antisocial behaviors due to disinhibition. And for some people, this is the case.

Trolling Posting comments online following the example or model of others offers the same anonymity as being in a large crowd. This can lead to an online form of disinhibition known as trolling—the posting of inflammatory, derogatory, or hateful messages about a person or a group. Some adolescents have died by suicide after being the target of trolling (Zhuo, 2010).

Research with people who frequently play video games online found that most of the people who engaged in trolling were younger men. The reasons they gave for trolling were varied. Some did it for deliberate revenge on someone else, while others trolled simply because they were bored, and others out of amusement with no other purpose in mind (Thacker & Griffiths, 2012).

Cyberbullying Studies in the United States, Canada, and Spain concluded that having a computer without parental control or monitoring is associated with more online aggression, including cyberbullying, among boys and girls ages 12 to 17 (Calvete et al., 2010; Law et al., 2010; Werner & Bumpus, 2010). In other studies, people who have watched a model perform a harmful act and are in turn disinhibited are more likely to engage in cyberbullying (Bussey et al., 2015; Udris, 2014). Thus, not having positive models or reinforcement to discourage such behavior, in combination with others' modeling antisocial behavior online, facilitates cyberbullying.

Observational Learning from Shows and Movies

In early work on the relationship between observed violence and aggressive behavior, researchers investigated the incidence of aggressive acts shortly after people viewed televised models committing violent acts. One analysis found a brief but sharp rise in violent actions peaking three to four days following highly publicized riots (Phillips, 1985).

Other early work examined the effects of highly publicized violence. For example, murder rates in the United States were found to increase by more than 12 percent over the expected rate for the three-day period following a televised championship boxing match, a phenomenon that was maintained over a

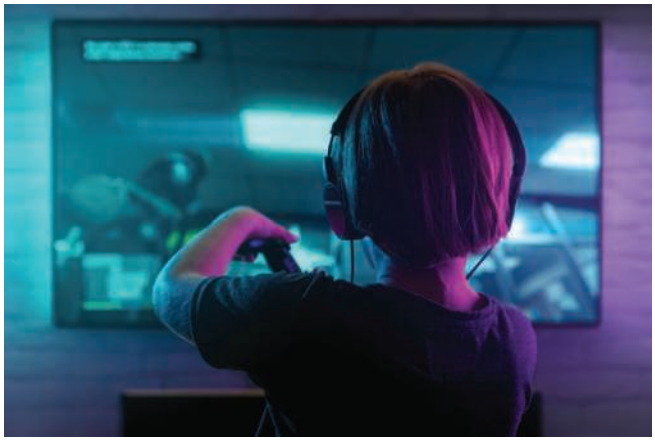
15-year period (Phillips, 1983). Self-directed violence also appears to increase following exposure to similar violence widely reported in the news media. The incidence of suicide tends to climb following the suicide of a movie star or other celebrity (Phillips, 1974).

A large-scale literature review confirms the relationship between the viewing of violent television programs in childhood and later aggressive behavior (Rogoff et al., 2003). A study of people in their early and mid-20s found a strong positive correlation between the amount of violence they had watched on television between the ages of 6 and 10 and their aggressive behavior as adults (Huesmann et al., 2003). Research with teenagers in Germany also found that exposure to violence in the media was highly related to aggressive behavior (Krahe et al., 2012).

The link between individuals' observing aggressive behaviors on a show and those individuals' engaging in aggressive behaviors themselves has also been causally demonstrated in experiments. For example, in a study with U.S. college students, participants were randomly assigned to watch a reality TV show with interpersonal aggression or to one of two control groups (i.e., supportive family surveillance reality program or a violent crime drama). Aggression was measured via the intensity and duration of a loud (and therefore painful) noise assigned to an (ostensible) opponent in a competitive task. The participants who had watched the reality TV show with aggression were more likely to aggress against their purported opponent compared to participants who had watched something else, even a violent crime drama—suggesting that the more realistic the aggression, the more it may serve to model aggression to observers (Gibson et al., 2016).

Observation Learning from Video Games

Research with large samples of children, teenagers, and college students in the United States, Japan, China, Singapore, Austria, and Germany found that the more individuals played violent video games, the more they engaged in aggressive and hostile behaviors (e.g., fighting with others, arguing with teachers) and the less they performed well in school and tended to help others. In general, the more violent the games, the more violent the resulting behavior (Anderson et al., 2010; Bartholow et al., 2005; Gentile et al., 2004; Holtz & Appel, 2011; Huesmann, 2010; Krahe & Möller, 2004; Padilla-Walker et al., 2010; Uhlmann & Swanson, 2004). Disinhibition as a result of violent



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Bandura and extensive follow-up research suggest that that violent video games model aggression, which increases in players.

video gaming can be connected to moral disengagement over time. Indeed, a 1.5-year longitudinal study with Chinese adolescents between the ages of 12 and 19 found that violent video game exposure was associated with later moral disengagement, and in turn, aggression (Teng et al., 2019).

It is not that people merely copy unethical behaviors (they do that), but their mindsets about the unethical behavior can also change after witnessing it—people may feel envious of others' getting away with some benefit to the self and morally disengaged (Thiel et al., 2021).

The good news is that the disinhibition effect seems to decline with age. A study of young American adults aged 18 to 25 demonstrated that disinhibition was stronger among the 18- to 19-year-olds compared to the 22- to 25-year-olds (Vaidya et al., 2010). This implies that younger people may be more vulnerable to the effects of modeled aggressive behavior.

Behaving Well: The Bright Side of Observational Learning

Although the implications of observational learning for problematic, maladaptive, and antisocial behaviors via disinhibition can be disheartening, it is important to consider that cooperative, prosocial, and adaptive behaviors are also learned through observational learning based on a model's behavior.

Observational Learning in the Family

Of course, one of the primary contexts in which people learn vicariously is in their families, with observational learning from parents, siblings, grandparents, and extended relatives as models. Children learn behaviors

related to so many domains of life, including how to interact with other people, one's home, belongings, and in public. Parents model behaviors like speaking, working, cleaning, eating, reading, TV watching, and sleeping—the behaviors that make up our days. As you may have picked up from prior chapters, internet, social media, and smartphone use can become negative and maladaptive if too frequent for children. Thus, modeling healthy behaviors with these technologies may be an important goal for parents. Indeed, in a study of over 500 pairs of German children (8–14 years old) and their parents, the healthier the mobile phone use modeled by parents, the healthier the behavior of their children (Hefner et al., 2019). Parents model behaviors that relate to how members of the family treat each other. Adults aged 25 to 35 in Pakistan who report that their parents modelled behaviors of filial obligation—that is, staying in contact with family and sharing traditions, avoiding conflict, providing assistance, and engaging in personal sharing—are more likely to engage in filial obligation behaviors (Khan et al. 2017). Siblings can also model behavior for each other, with younger siblings and those with positive relationships being more likely to imitate their siblings who are teaching (Howe et al., 2019).

Observational Learning in Education

Almost all educational goals can be supported by pedagogy that incorporates observational learning, with instructors performing behaviors associated with the skills and/or knowledge that are being taught (e.g., Devi et al., 2022; Fiorella & Mayer, 2016).

Scholars of reading and writing build on Bandura's theory to propose that observation is the first step in the learning process and is followed by emulation, feedback, internalization, and mastery (Schunk & Zimmerman, 1997). For example, application of modeling has been associated with students' learning and mastering writing of argumentative or synthesis texts (e.g., Braaksma et al., 2002; Raedts et al., 2007) and cooperative revisions of texts (Van Steendam et al., 2010). Observational learning has also facilitated creativity in both visual (e.g., creating a collage) and verbal (e.g., writing a poem) work, as evidenced by research with Dutch 10th grade students (Groenendijk et al., 2013).

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Observational learning is central to teachers' pedagogical approaches to education.

Beyond the lessons taught that relate to curricula, teachers also serve as role models for broader behavior, interests, and personality (Ahn et al., 2020). Within the context of education, other students can also serve as models of adaptive academic behavior, such as in learning music (e.g., Nielsen et al., 2018), and facilitated by children's having status as academically successful (Masland & Lease, 2016).

Observational Learning in the Workplace

In addition to learning skills that are necessary to the occupation at hand, the workplace can facilitate a wide variety of productive behaviors via observation, with supervisors and coworkers serving as models. Research with employees from a wide array of industries in China, such as manufacturing, education, pharmaceutics, finance, and accounting, found that the more people observed helping behaviors of their supervisors, the more they engaged in behaviors that helped their team; there was also the added benefit of better workplace well-being (Chen et al., 2020).

In a study of over 700 American adults who work in higher education, research found that people are more likely to behave in anti-aggressive ways when they have witnessed anti-aggressive behaviors—that is, people behaving to intervene on aggression in the workplace (Hollis, 2019).

Observational Learning and Health

Health behaviors are behaviors that support physical well-being, such as exercising, going to the doctor, sticking with a prescription medication, and eating healthfully. Observational learning thus has a place in people's learning health behaviors and can help doctors, nurses, and other healthcare providers support health goals, education, and research (Devi et al., 2022). Research suggests that people engage in more health behaviors after observing models engage in those behaviors, including for people living with HIV/AIDs to learn healthy habits (Glanz et al., 2015), adolescents

engaging in healthy eating (Dewar et al., 2012), and adults with diabetes enacting self-care to manage their metabolisms (Bai et al., 2009; Whittemore et al., 2005).

Observational Learning and Prosociality

People also learn unselfish and prosocial behaviors by observing others. For example, one study in China found that 5-year-old children who observed a classmate being honest about peeking in a guessing game and receiving praise were more likely to engage in honest behavior themselves (Ma et al., 2018). For children and adults, video games with characters that model helping, generous, and good behaviors have a positive effect on subsequent prosocial behaviors (Gentile et al., 2009). After observing others engage in these behaviors, people are more likely to donate money to help others (Blake et al., 2016; Freeman et al., 2009).

A meta-analytic review of research on prosocial modeling examined 88 studies with over 25,300 participants total, finding that there is indeed a reliable effect of modeling prosocial behavior on an observer's prosocial behavior (Jung et al., 2020). This meta-analysis also found that prosocial modeling effects were strongest in Asian countries, though this was not due to an effect of collectivism versus individualism. Prosocial modeling also has a stronger effect on immediate, compared to later, behaviors. There was also a gender difference, with the effect being stronger for samples that had more women than men in them. People were more likely to imitate the good behavior when they observed the model being rewarded for it. People were likely to copy prosocial behavior whether or not the modelled behavior provided material or immaterial help, was copied with people watching or not, and regardless of individuals' ages.

Pause for Reflection

Are there goals you have reached more easily because you saw certain behaviors modeled?

Characteristics of the Modeling Situation

Bandura (Bandura, 1977, 1986) proposed that three factors influence modeling:

1. the characteristics of the models
2. the characteristics of the observers
3. the consequences associated with the behaviors

Characteristics of the Models

Various attributes of the model performing the behavior and the behavior they're performing can influence the likelihood that another person will imitate them.

Models Who Are Like Us The characteristics of the models affect our tendency to imitate them. In real life, we may be more influenced by someone who appears to be similar to us than by someone who differs from us in obvious and significant ways. In the laboratory, Bandura found that although children imitated the behavior of a child model in the same room, a child in a film, and a filmed cartoon character, the extent of the modeling decreased as the similarity between the model and the participant decreased. The children showed greater imitation of a live model than an animated character, but even in the latter instance the modeled behavior was significantly greater than that of the control group that observed no models. Whether people are attending to age, race and ethnicity, or some other grouping cue, the pattern of biased modelling is that people will imitate others they consider in their in-groups rather than people in their out-groups.

There is some recent research that gives empirical support to that idea. For example, babies (14-month-olds) are more likely to copy the behavior of models speaking their native language compared to that of models speaking a foreign language (Buttelmann et al., 2013). Other work suggests that 5-year-olds are more likely to imitate behavior of a neutral group than an out-group, which is specified by differently colored scarves (Oostenbroek & Over, 2015).

In contrast, however, other studies find that the ethnicity of models does not matter. For example, one study in Germany found that 4-year-olds imitated the behaviors of models regardless of whether they were of the children's in-group versus out-group (i.e., German vs. Chinese) across different tasks and after observing models both in person and on video (Krieger et al., 2016). Another study demonstrated that 3-year-olds do not copy expressions of object preferences more or less based on the race or ethnicity of the model (Shutts et al., 2010).

Thus, starting in childhood, people may rely on some cues of their in-group but not others to decide which models' behavior they will copy. Indeed, starting as young as the age of 5, people may rely on group labels more than physical appearance (Diesendruck & HaLevi, 2006).

Psychological Distance to Model How psychologically close we feel to others is not only connected to how similar they are to us, but also to more

basic attributes of the modeling situation, such as how far away they and their behaviors are in time and space (Hansen & Genschow, 2020). Across three experiments, researchers tested this idea with college students in Austria and the United States by having observers watch videos of models folding towels or paper into the shape of a dog and telling them the video was from that year (temporally near) or from 1990 (temporally far), or that the video was made in New York (spatially close) or Los Angeles (spatially far) (Hansen et al., 2016). The researchers found that the more psychologically far away the model is from the observer, the less likely the observer is to perfectly imitate the model's behavior (Hansen et al., 2016).

Status of Models Status and prestige are also important factors. For example, pedestrians might be more likely to cross a street against a red light if they see a person in a suit and tie crossing than if they see a person dressed in casual clothes crossing. Television commercials make effective use of high-status, high-prestige models with athletes or celebrities who claim to use a particular product. The expectation is that consumers will imitate their behavior and buy the advertised product.

This status effect has been studied with children and adults. In one study with 5-year-olds in Scotland, children viewed either higher status models (their teacher or principal) or lower status models (an experimenter and other adult) engage in actions to get a reward out of a transparent puzzle box (McGuigan, 2013). They were more likely to copy the exact behavior of the high-status models compared to the low-status models, even when parts of the behavior were not necessary to get to the reward. Similarly, undergraduate women in the Netherlands were more likely to copy a popular peer than one who had less social status (Lansu et al., 2015). Some children may opt to copy the behavior of adults (who tend to have more status) more so than other children. In one study, 5-year-olds copied both task-relevant and task-irrelevant behaviors of adults more often than those of other children, regardless of the expertise the model said they had (Wood et al., 2012).

Attractiveness of Models Consistent with the broad "halo effect" in which attractive people are perceived to have more positive traits, people are also more likely to copy the behavior of attractive models. Across two experiments, researchers found that older adolescents and young adults in China were more likely to copy the art coloring behavior of people who were attractive and viewed as positive than of people who were not attractive and viewed as negative (Shen et al., 2023). This also extends to physical indications of disease that are thought to be unattractive. University students in Finland were less likely to imitate the hand movements of a model if the model's hands had visible signs of skin disease (Aulbach et al., 2023).

Type of Behavior Displayed by Models The type of behavior the model performs affects the extent of imitation. Highly complex behaviors are not imitated as quickly and readily as simpler behaviors. In one study, infants as young as 16 months learned to imitate the behavior of a model using a tool, but only if they had been previously shown the object or purpose of using the tool. They successfully imitated the behavior of a model using a rake after they had been shown the use of the rake in retrieving a toy that was out of their reach (Esseilly et al., 2013). Observers may also be more likely to copy behaviors they know to be consistent with norms than behaviors that are not consistent with norms. For example, 3-year-old children in Hungary imitated actions of a model that used tools in a conventional way (i.e., cutting up a piece of paper using a pair of scissors and having a bite of food with a fork) more often than if the model used the tools in an unconventional way (i.e., cutting up a banana using a pair of scissors and combing one's hair with a fork) (Oláh & Király, 2019).

Characteristics of the Observers

Attributes of the person observing a behavior are associated with the likelihood that they will copy a model's behavior.

Age of Observers In infancy, modeling is limited to immediate imitation. Infants have not yet developed the cognitive capacities (the imaginal and verbal representational systems) needed to imitate a model's behavior some period of time after observing it. In infancy, it is necessary for the modeled behavior to be repeated several times after the infant's initial attempt to duplicate it. Also, the modeled behavior must be within the infant's range of sensorimotor development. Nonetheless, infants are apt learners. Beginning around 10 months, babies can tell when behaviors are intentional, which is important to knowing which behaviors one should copy (Baldwin et al., 2001). By 1 year of age, babies can also note what behaviors are necessary to get a certain reinforcement (result), but from this point they also tend to copy behaviors that are both reinforcement-related and -unrelated (Hilbrink et al., 2013).

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People tend to be more likely to copy behavioral models who are attractive and have high status, the basis for many advertisement campaigns, including on these billboards in New York City.

By about age 2, children have developed sufficient attentional, retention, and production processes to begin imitating behavior some time after the observation rather than immediately. During this time, children become attuned to whether actions are conventional and follow norms (e.g., Diesendruck & Markson, 2011; Rakoczy & Schmidt, 2013). By age 4, children can learn from observing the behavior of people who are demonstrating behavior for another person than the child, indicating by this time they don't need the model to indicate they are going to demonstrate a behavior (Nielsen et al., 2012).

The behaviors we find reinforcing, and thus choose to imitate, will change with age. Younger children are reinforced primarily by physical stimuli such as food, affection, or punishment. Older children associate positive physical reinforcers with signs of approval from significant models and unpleasant reinforcers with signs of disapproval. Eventually these rewards or punishments become self-administered.

Self-Esteem People who are low in self-confidence and self-esteem are more likely to imitate a model's behavior than are people high in self-confidence and self-esteem. In the study on imitation in undergraduate women in the Netherlands, women with lower self-esteem were more likely to imitate popular peers compared to women with higher self-esteem (Lansu et al., 2015).

Social Rejection Relatedly, people may be more likely to copy others' modeled behavior when they have experienced social ostracism (e.g., Hopkins & Branigan, 2020; Watson-Jones et al., 2016). This makes sense given that a person may be better able to ingratiate themselves back into their social group if they evince the same behaviors, signaling their fit with and similarity to members of that group. For example, a study of 7- to 12-year-olds in Scotland induced ostracism with an often-used computer game where avatars throw the ball to each other called "cyberball," in which the two other ostensible players stop throwing the ball to the participant's avatar. Children who were left out of the game were more likely to imitate their partner's language during a follow-up picture-matching game compared to children whose avatar was included in the game (Hopkins & Branigan, 2020).

Mental Imagery Ability Having the ability to cognitively represent the modelled behavior and reinforcement, especially imagined in greater detail, may facilitate the observer's learning that behavior. Indeed, in a study of Persian athletes, those who had high levels of skill and goal imagery were also higher in observational learning abilities (Hatami, 2016).

The Reward Consequences Associated with the Behaviors

The reward consequences linked to a particular behavior can affect the extent of the modeling and even override the impact of the characteristics of the models and the observers. A high-status model may lead us to imitate a certain behavior, but if the rewards are not meaningful to us, we will discontinue the behavior and be less likely to be influenced by that model in the future.

Seeing a model being rewarded or punished for displaying a particular behavior affects imitation. In a Bobo doll study, some of the children watched as the model who hit the Bobo doll was given praise and a soda and candy. Another group of children saw the model receive verbal and physical punishment for the same aggressive behavior. The children who observed the punishment displayed significantly less aggression toward the Bobo doll than did the children who saw the model being reinforced (Bandura, 1965). More recent research similarly finds that young children, even in preschool, will not copy behavior if there is not an appealing reward or if there will be negative repercussions, like destroying a valuable item (e.g., Keupp et al., 2016).

Pause for Reflection

Which characteristics of the modeling situation do you think affect your likelihood to engage in certain behaviors?

The Processes of Observational Learning

Bandura analyzed the nature of observational learning and found it to be governed by four related mechanisms: attentional processes, retention processes, production processes, and incentive and motivational processes (refer to Table 13.1).

Attentional Processes

Observational learning or modeling will not occur unless the learner pays attention to the model. Merely exposing the person to the model does not guarantee that the subject will be attentive to the relevant cues and stimulus events or even perceive the situation accurately. The person must perceive the model accurately enough to acquire the information necessary to imitate the model's behavior. Thus, Bandura concluded "selective attention is, therefore, one of the crucial subfunctions in observational learning" (Bandura, 1986, p. 51).

Several variables influence attentional processes. In the real world, as in the laboratory, we are more attentive and responsive to some people and situations than to others. Thus, the more closely we pay attention to a model's behavior, the more likely we are to imitate it.

We mentioned such characteristics as age, status, gender, and the degree of similarity between model and learner. These factors help determine how closely an individual attends to the model, especially in light of people's tendency to first attend to people's faces (Gullberg & Holmqvist, 2002). Thus, models often naturally engage observers by drawing their attention to the behavior, such as with sound or objects (e.g., Abravanel et al., 1976; Uzgiris, 1979).

Attention to modeled behavior also varies as a function of the observers' cognitive and perceptual skills and the value of the behavior being modeled. The more highly developed our cognitive abilities, and the more knowledge we have about the behavior being modeled, the more carefully we will attend to the model and perceive the behavior. One important skill for observational learning is cognitive flexibility, the ability to efficiently switch among cognitive processes to produce a behavior. Cognitive flexibility begins to develop in early childhood with marked increases from ages 7 to 9, maturing by age 10, but then improving to peak in people's 20s (Dajani & Uddin, 2015).

When observers watch a model doing something they expect to do themselves, they pay greater attention than when the modeled behavior has no personal relevance. Observers also pay closer attention to modeled behavior that produces positive or negative consequences rather than neutral outcomes. Better attentional processes have been associated with skill acquisition via observational learning, such as in the context of football (soccer) in Spain (Huang & Liu, 2020).

Table 13.1 Observational learning processes

Attentional processes	Cognitive processes and perceptual skills that allow us to pay sufficient attention to a model and perceive the model accurately enough to imitate displayed behavior. Example: Attending to a more expert driver's (model's) eyes, hands, and feet when they move to perform a behavior to drive, in order to learn.
Retention processes	Retaining or remembering the model's behavior so that we can imitate or repeat it at a later time; for this, we use our cognitive processes to form mental images and verbal descriptions of the model's behavior. Example: Taking notes on the lecture material or the video of a person driving a car and deliberately studying them.
Production processes	Translating the mental images or verbal symbolic representations of the model's behavior into our own overt behavior by physically producing the behavior and receiving feedback on the accuracy of our continued practice. Example: Getting in a car with an instructor to practice driving and dodging the traffic cones in the school parking lot.
Incentive and motivational processes	Perceiving that the model's behavior leads to a reward and thus expecting that our learning—and successful performance—of the same behavior will lead to similar consequences. Example: Expecting that when we have mastered driving skills, we will pass the state test and receive a driver's license.

Retention Processes

We must be able to remember significant aspects of the model's behavior in order to repeat it later. To retain what has been attended to, we must encode it and represent it mentally, perhaps even symbolically. We can retain information about a model's behavior in two ways: through an internal imagination and representation system or through a verbal system. In the "imaginal" system, we form vivid, easily retrievable images while we are observing the model.

This common phenomenon accounts for your being able to summon up a picture of the person you dated last week or the place you visited last summer. In observational learning, we form a mental picture of the model's behavior and use it as a basis for imitation at some future time. People with stronger retention skills demonstrate stronger observational skill learning, including in the context of football (soccer) in Spain (Huang & Liu, 2020). By paying attention (the first process necessary for observational learning) to the relevant parts of a model's behavior, people can encode information more effectively. For example, when learning information that can be drawn (e.g., the Doppler effect), watching the instructor's hand move as they draw leads to better learning than watching the instructor's whole body or not seeing the drawing at all (e.g., for American college students, see Fiorella & Mayer, 2016).

The verbal representational system operates similarly and involves a verbal coding of the behavior we have observed. For example, during observation we might describe to ourselves what the model is doing. These descriptions or codes can be rehearsed silently, without overtly displaying the behavior.

For example, we might talk ourselves through the steps in a complicated skill, mentally rehearsing the sequence of behaviors we will perform later. When we wish to perform the action, the verbal code will provide hints, reminders, and cues. Together, these images and verbal symbols offer the means by which we store observed situations and rehearse them for later performance.

Two important abilities in retention are memory capacity—how much can be encoded and remembered—and selective memory—how well more important information can be encoded and remembered. Although memory capacity rises to and then peaks in and decreases after young adulthood, selective memory increases into young adulthood and remains stable until very old age, when it declines slightly, as evidenced by a study of 5- to 96-year olds in the United States (Castel et al., 2011).

Production Processes

Translating imaginal and verbal and symbolic representations into overt behavior requires the production processes, or enacting behaviors that are mentally represented. Although we may have attended to, retained, and rehearsed representations of a model's behavior, we still may not be able to perform the behavior correctly. Thus, production processes include practice. This is most likely to occur with highly skilled actions that require the mastery of many component behaviors. One must correctly sequence constituent behaviors, monitor those behaviors and compare them to the mental model, and correct them live as needed (Carroll & Bandura, 1985, 1990).

Consider learning how to drive a car. We learn fundamental motions from watching a model drive. We may consider the symbolic representations of the model's behavior many times, but at first our translation of these symbols into actual driving behavior will be clumsy. We may apply the brakes too soon or too late or overcorrect the steering. Our observations may not have been sufficient to ensure immediate and skilled performance of the actions. Practice of the proper physical movements, and feedback on their accuracy, is needed to produce the smooth performance of the behavior. This applies to all other behaviors, from those needed to drive, dance, write, paint, cook, and clean to those constituting playing musical instruments or in sports. The research cited previously also found that individuals who score higher in production processes also report better observational skill learning in the context of football (soccer) in Spain (Huang & Liu, 2020).

Production processes can be improved with various strategies, especially those that facilitate correctly sequencing behaviors, monitoring and comparing behaviors to those of the model, and correcting the behaviors. For example, if learners know whether models performed the behaviors well or imperfectly, they are better able to modulate their own behaviors to be closer to the ideal behaviors and further from the imperfect behavior, evidenced in a study with Canadian undergraduate students (Andrieux & Proteau, 2016). Time spent engaging in "formal practice"—deliberately performing behavior to become more effective at that behavior (e.g., in music, warming up and then performing technical exercises such as playing each of the scales or sight-reading)—is more effective in allowing the observational learner to master a skill compared to just engaging in the behavior without behavioral improvement as the goal. This is according to a 4-month study with student musicians in the United Kingdom

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In learning any behavior, as evidenced in learning how to drive, one engages in four sets of cognitive processes that carry a person from observing the behavior to engaging in it: attention, retention, production, and motivational processes.

(Bonneville-Roussy & Bouffard, 2015). Another strategy is to discuss and practice the behavior with peers, who can learn from each other's high- and low-quality behavior, such as with students at a music academy in Norway (Nielsen et al., 2018).

Incentive and Motivational Processes

No matter how well we attend to and retain behaviors we observe or how much ability we have to perform them, we will not do so without the incentive or motivation processes. When incentives are available, observation is more quickly translated into action. Incentives also influence the attentional and retention processes. We may not pay as much attention without an incentive to do so, and when less attention is paid, there is less to retain.

Anticipation of Reinforcement

Our incentive to learn is influenced by our anticipation of the reinforcement or punishment for doing so. Seeing that a model's behavior produces a reward or avoids a punishment can be a strong incentive for us to pay attention to, remember, and perform that same behavior correctly. The reinforcement is experienced vicariously during our observation of the model, after which we expect our performance of the same behavior to lead to those same consequences. We may learn to engage in socially normative behaviors, whether prosocial or antisocial, adaptive or maladaptive, because of the anticipated results of that behavior. For example, adolescent boys (ages 14–19) may learn to engage in stereotypical and sometimes negative verbal and physical behaviors labeled "masculine". Specifically, they learn that they may be punished when they engage in other sorts of behaviors via others' masculine norm enforcement and rewarded when they engage in "masculine" behaviors via status elevation and preservation and friendship enhancement (Reigeluth & Addis, 2016).

Reinforcement Is Not Always Necessary

Humans are complex thinkers who can also learn observationally in the absence of direct reinforcement. It may be that individuals are motivated by something more abstract than a response to their behavior, such as the goal to be a certain type of person. Bandura (1989) wrote:

> Performance of observationally learned behavior is influenced by three major types of incentive motivators—direct, vicarious, and self-produced. People are more likely to exhibit modeled behavior if it results in valued outcomes than if it has unrewarding or punishing effects. The observed cost and benefits accruing to others influence the performance of modeled patterns in much the same way as do directly experienced consequences. People are motivated by the successes of others who are similar to themselves but are discouraged from pursuing courses of behavior that they have seen often result in adverse consequences. Personal standards of conduct provide a further source of incentive motivation. The evaluation reactions people generate to their own behavior regulate which observationally learned activities they are most likely to pursue. They express what they find self-satisfying and reject what they personally disapprove. (p. 24)

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From small rewards such as time watching our favorite shows or treating ourselves to our favorite baked good, to big rewards like parties with friends or travels we've saved up for, we all reward ourselves for engaging in behaviors that support our goals—a form of self-reinforcement.

Bandura also pointed out that although reinforcement can facilitate learning, reinforcement is not always required for learning to occur. Many factors other than the reward consequences of the behavior determine what we attend to, retain, and rehearse. For example, loud sounds, bright lights, and exciting videos may capture our interest even though we may not have received any reinforcement for paying attention to them.

Bandura's research suggests that children watching a model on television or in a video game imitate the model's behavior regardless of whether they have been promised a reward. Therefore, reinforcement can assist in modeling but is not vital to it.

People may be motivated to copy others' modelled behavior when they see those people as exemplifying traits they would like to have. For example, without reinforcement, employees are more likely to engage in trustworthy behaviors when their supervisors engage in trustworthy behaviors, which exemplify personality and character that most people want to exhibit (e.g., De Cremer et al., 2018). It may be that self-image drives such effects. Emotions can also be motivating in combination with goals. Researchers studied the friendships of high school students in the United States and found that the more likely an individual's friend was to engage in prosocial behavior, the more likely the individual would engage in prosocial behavior, and this was especially the case for friendships characterized by more positive emotions and more interactions (Barry & Wentzel, 2006).

Pause for Reflection

Think through a behavior you have learned through observation. How did the attentional, retention, production, and incentive/motivational processes unfold for you?

Self-Reinforcement and Self-Efficacy

In Bandura's approach to personality, the self is a set of cognitive processes and structures that engage in thought and perception. Two important constructs related to the self are self-reinforcement and self-efficacy.

Self-Reinforcement

Self-reinforcement is as important as reinforcement administered by others, particularly for older children and adults. We are able to set personal standards of behavior and achievement. We can reward ourselves for meeting or exceeding these expectations and standards, and we can punish ourselves for not meeting them. Self-administered reinforcement can be tangible, such as treating yourself to a gourmet coffee or going on a vacation, or it can be emotional, such as pride or satisfaction from a job well done.

Self-administered punishment can be expressed behaviorally, such as by staying home instead of going out, or in feelings of shame, guilt, or depression about not behaving the way we wanted to. Self-reinforcement appears conceptually similar to what other theorists call conscience or superego, but Bandura denies that it is the same.

A continuing process of self-reinforcement regulates much of our behavior. It requires internal standards of performance, subjective criteria or reference points against which we evaluate our behavior. Our past behavior may become a reference point for evaluating present behavior and an incentive for better performance in the future. When we reach a certain level of achievement, it may no longer challenge, motivate, or satisfy us, so we raise the standard and require more of ourselves. Failure to achieve may result in lowering the standard to a more realistic level.

In many contexts, people employ self-reinforcement to support the pursuit of a goal. For example, in a study of athletes and performers in the United Kingdom, researchers found that participants used psychological reward and punishment via self-talk to regulate their performance (Savage et al., 2022). Self-reinforcement has also been integrated into interventions designed to support people in reducing maladaptive behaviors. For example, as part of one intervention in Indonesia that aimed to decrease adolescents' internet addiction, participants were trained in how to self-reward and self-punish in healthy ways to modulate their internet use (Setyawan & Masykur, 2022). Participants' self-regulation increased and their internet addiction weakened as a result of this intervention.

Pause for Reflection

What are some self-reinforcement strategies you use to shape your behavior?

self-reinforcement Administering rewards or punishments to oneself for meeting, exceeding, or falling short of one's own expectations or standards.

Self-Efficacy, or Believing You Can

In Bandura's system, **self-efficacy** refers to feelings of adequacy, efficiency, and competence in coping with life. Our perceptions of how well we have met our behavioral standards determine our self-efficacy. Meeting and maintaining our performance standards enhance self-efficacy; failure to meet and maintain them reduces it (Bandura, 2012, 2013).

Another way Bandura described self-efficacy was in terms of our perception of the control we have over our lives:

> People strive to exercise control over events that affect their lives. By exerting influence in spheres over which they can command some control, they are better able to realize desired futures and to forestall undesired ones. The striving for control over life circumstances permeates almost everything people do. (Bandura, 1995, p. 1)

Another psychologist defined self-efficacy quite simply and effectively as the "power of believing you can" and added that "believing that you can accomplish what you want to accomplish is one of the most important ingredients . . . in the recipe for success" (Maddux, 2002, p. 277). Thus, believing that you have the ability to be successful becomes a powerful asset as you strive for achievement.

People who experience high levels of self-efficacy tend to feel they can deal effectively with events and situations, tend to plan for the future, and experience higher levels of satisfaction and happiness in life. In contrast, people who feel low levels of self-efficacy tend to have more difficulty coping with obstacles, planning for the future, and experiencing psychological well-being. Research has established these patterns in many contexts, including with students in Canada (Azizli et al, 2015), schoolteachers in China (Yin, 2022), and business managers in Germany (Korman et al., 2022).

Sources of Information About Self-Efficacy

Our judgments about our self-efficacy can be based on the following four sources of information:

1. Performance attainment
2. Vicarious experiences
3. Verbal persuasion
4. Physiological and emotional arousal

Performance Attainment The most influential source of efficacy judgments is *performance attainment*. Previous success experiences provide direct indications of our level of mastery and competence. Prior achievements demonstrate our capabilities and strengthen our feelings of self-efficacy. Prior failures, particularly repeated failures in childhood, lower self-efficacy.

Much research suggests that mastering skills or accomplishing goals that were once difficult or impossible strengthens self-efficacy. Success of high school students studying chemistry in Turkey (Capa-Aydin et al., 2018) and of 4th to 8th graders studying reading and math in the United States (Butz & Usher, 2015) were associated with higher self-efficacy for students. This pattern goes for adults and physical accomplishments as well. For example, older adults (Li et al., 2001) and young adult women (Weitlauf et al., 2001) who trained in martial arts or self-defense experienced an increase in self-efficacy. People trying to quit smoking who were able to avoid smoking for a day felt stronger self-efficacy (Warner et al., 2018). Thus, put simply, the more we achieve, the more we tend to believe we can achieve, and the more competent and in control we feel.

Vicarious Experiences *Vicarious experiences*—seeing other people perform successfully—strengthen self-efficacy, particularly if the people we observe are similar to us in their abilities. In effect, we are saying, "If they can do it, so can I." In contrast, seeing others fail can lower self-efficacy: "If they can't do it, neither can I." Therefore, effective models are vital in influencing our feelings of adequacy and competence. These models also show us appropriate strategies for dealing with difficult situations.

The research cited previously that found success of high school students studying chemistry in Turkey was associated with higher self-efficacy also found that vicarious experiences played an important role (Capa-Aydin, 2018). Likewise, a study that examined scholastic self-efficacy more generally in elementary students in Australia found that vicarious experiences of academic success supported students' feelings of self-efficacy (Phan & Ngu, 2016). Employees, especially women, are more likely to speak up at work when their women leaders speak up, providing a vicarious experience (Taiyi Yan et al., 2022). Research with adults in the United States suggests that individuals must see their

self-efficacy Our feeling of adequacy, efficiency, and competence in coping with life.

peers as potential role models rather than as competitors or referents for social comparison to benefit from their successes in the workplace environment (Downes et al., 2021).

Verbal Persuasion

Verbal persuasion (sometimes called *social persuasion*), which involves simply reminding people that they have the ability to achieve whatever they want to achieve, can enhance self-efficacy. This may be the most common of the four informational sources and one frequently used by parents, teachers, romantic partners, coaches, friends, and therapists who say, in effect, "You can do it." To be effective, verbal persuasion must be realistic.

In the study cited previously, elementary students in Australia who felt supported by verbal persuasion in the context of school experienced higher self-efficacy (Phan & Ngu, 2016). Older students in 7th and 9th grade in South Korea rated their teachers as a positive source of verbal persuasion, and that verbal persuasion supported their self-efficacy (Won et al., 2017). Adults teaching English in China from other countries experienced stronger self-efficacy if they received positive and encouraging feedback from their managers, as this feedback made their work feel valuable (Liu & Gumah, 2020).

Physiological and Emotional Arousal

The fourth and final source of information about self-efficacy is *physiological and emotional arousal*. How fearful or calm do we feel in a stressful situation? We often use this type of information as a basis for judging our ability to cope. We are more likely to believe we will master a problem successfully if we are not agitated, tense, or bothered by headaches. The more controlled and composed we feel, the greater our self-efficacy. The higher our level of physiological and emotional arousal, the lower our self-efficacy. The more fear, anxiety, or tension we experience in a given situation, the less we feel able to cope.

Research has provided support for the idea that physiological and emotional arousal feeds into our self-efficacy. We observe this in high-stress jobs. Researchers examined the relationship between positive and negative emotions and self-efficacy in over 3,000 teachers in Croatia in a six-month longitudinal study (Burić et al., 2020). They found that the more negative emotions of anger, exhaustion, and hopelessness teachers felt, the lower their self-efficacy; and the higher their self-efficacy, the more positive emotions of joy and pride they experienced. In a study of over 600 military officer cadets, special infantry and Marine Corps recruits, and nonspecialized recruits in the Netherlands, researchers found that people who engaged in healthy and effective coping with stress and negative emotions had the highest coping self-efficacy (Delahaij & Van Dam, 2017). Similar results emerged in a study of military cadets in Italy, with the additional findings that coping self-efficacy was associated with emotional stability and avoidance of burnout (Alessandri et al., 2018).

Ways of Increasing Self-Efficacy

Given the four sources of information that feed into self-efficacy, Bandura concluded that certain conditions increase self-efficacy:

1. Exposing people to success experiences by arranging reachable goals increases performance attainment.
2. Exposing people to appropriate models who perform successfully enhances vicarious success experiences.
3. Providing verbal persuasion encourages people to believe they have the ability to perform successfully.
4. Strengthening positive and decreasing negative emotions and physiological arousal through proper diet, stress reduction, and exercise programs increases strength, stamina, and the ability to cope.

Bandura applied these conditions to enhance self-efficacy in a variety of situations. He helped people learn to play musical instruments, relate better to people of other genders, master computer skills, give up cigarette smoking, and conquer phobias and physical pain. Other scholars have conducted research that supports these ideas.

An intervention that trained employees in a Dutch police district in strategies to cope with negative feelings, create positive feelings, and communicate with leaders well at work helped reduce negative affect and supported people's feelings of self-efficacy (Van den Heuvel et al., 2015). Delivering verbal persuasion via motivational interviewing helped support American college students' pro-environment behavior goals, partly by increasing their self-efficacy (Tagkaloglou & Kasser, 2018).

It is important to consider that attempts to support people's self-efficacy can backfire if the encouragement is condescending or if people are given help they do not want or need. For example, in a study of over 100 pregnant people, longitudinal analyses suggest the more help they were offered at work that was interfering with (versus enabling of) work predicted lower

self-efficacy the following week and intentions to quit their jobs after giving birth (Jones et al., 2020).

Pause for Reflection

What's the most important source of information for your academic self-efficacy? What about self-efficacy in friendships? Other sources for other kinds of self-efficacy?

Development of Self-Efficacy

Childhood

Self-efficacy develops gradually over time. Infants begin to develop self-efficacy as they try to exercise greater influence over their physical and social environments. They learn about the consequences of their own abilities such as their physical strength, social skills, and language competence. These abilities are in almost constant use acting on the environment, primarily through their effects on parents. Ideally, parents are responsive to their growing child's activities and attempts to communicate and will provide stimulating surroundings that permit the child the freedom to grow and explore. Before age 4, parents may be considered the primary source of modeling and feedback for self-efficacy (e.g., Hilbrink et al., 2013; Nielsen et al., 2012).

The significance of parental influence diminishes as the child's world expands and admits additional models such as siblings, peers, and other adults. Like Adler, Bandura considered birth order within the family to be important. He argued that first-born children and only children have different bases for judging their own abilities than do later-born children. We have learned that younger children can learn from and tend to more often imitate their older siblings (Howe et al., 2019).

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For children, families are one of the main sources of self-efficacy support.

Among friends, children who are the most experienced and successful across domains serve as high-efficacy models for other children. Peers provide comparative reference points for appraising one's own level of achievement. For example, children who value and succeed in academics are more likely to be models in that domain for others (Masland & Lease, 2016).

Teachers influence self-efficacy judgments through their impact on the development of cognitive abilities and problem-solving skills, which are vital to efficient adult functioning. Children often rate their own competence in terms of their teachers' evaluations of them. In Bandura's view, schools that use ability groupings undermine self-efficacy and self-confidence in students who are assigned to the lower groups. Competitive practices such as grading on a curve are also problematic. Indeed, in a study of over 2,500 middle school students in the United States, academic (i.e., math and reading) self-efficacy, children's achievement, and teacher feedback shaped general self-efficacy (Butz & Usher, 2015). And as Bandura predicted, their earlier self-efficacy levels played a role too.

Adolescence

The transitional experiences of adolescence involve coping with new demands and pressures, from a growing awareness of sex to the choice of college and career. Adolescents must establish new competencies and appraisals of their abilities. Bandura noted that the success of this stage typically depends on the level of self-efficacy established during the childhood years.

Still, parents are important for adolescents' self-efficacy across domains. Supportive parenting supports development of self-efficacy. For example, research with teenagers in Chicago found that having supportive parents was positively related to the students' sense of self-efficacy. The more supportive the parents, the higher their adolescent's self-efficacy (McCoy & Bowen, 2014). A study of teenagers in Malaysia concluded that supportive parenting from fathers is as important as that from mothers in supporting development of self-efficacy and overall happiness (Yap & Baharudin, 2015).

When parents exact too much control on their adolescents' lives, it can undermine their self-efficacy. American young adults whose parents had exercised tight control over their upbringing exhibited lower self-efficacy than those whose parents were less controlling (Givertz & Segrin, 2014).

Parents with high self-efficacy can also be models for their children. Teens with high self-efficacy parents tend to have fewer behavioral problems, less anxiety, and better school performance and were more open and honest in communicating with their parents than those with low self-efficacy parents (Steca et al., 2011).

A study of Black teenage boys in an American public housing project found that those with higher levels of parental support, healthy control, and self-efficacy had higher levels of self-efficacy themselves and were less likely to engage in illegal substance use and antisocial behaviors (Nebbitt, 2009). Similarly, a study of Mexican American families demonstrated that high parental self-efficacy was related to higher self-efficacy and fewer behavioral problems among adolescents (Dumka et al., 2010).

The more self-efficacy older adolescents feel, the better they feel about themselves generally (i.e., self-esteem), as evidenced by a study in India (Bhatt & Bahadur, 2018). Especially in beginning college, academic self-efficacy is an essential buffer against the burnout that can come with the academic challenge of university. This was supported by a study with undergraduates in England (Cassidy, 2015).

Adulthood

Bandura divided adulthood into two periods: young adulthood and the middle years. Young adulthood involves new adjustments such as marriage, parenthood, and trying to establish a career. High self-efficacy is necessary for successful outcomes of these experiences. People low in self-efficacy may face challenges in dealing adequately with these new demanding situations. For example, American mothers with high self-efficacy experienced significantly less physical and emotional strain from work–family conflicts than did women low in self-efficacy (Bandura, 1995). Another study examined parental self-efficacy of nearly 200 Israeli married couples who had children. The more parental self-efficacy people had, the more satisfied they were with their marriage; but when children engaged in problematic behavior, their parental self-efficacy was reduced (Matalon & Turliuc, 2022). Self-efficacy at work is essential to well-being and success (e.g., Alessandri et al., 2018; Tatum, 2018), which is particularly important as people begin their careers in adulthood. Another challenge at this stage is maintaining physical health via exercise amid an increasingly busy schedule, but self-efficacy supports exercising and vice versa (e.g., Garn & Simonton, 2020; Kangas et al., 2015).

The middle years of adulthood may also be stressful as people reevaluate their careers and their family and social lives. As we confront our limitations and redefine our goals, we must reassess our skills and find new opportunities for enhancing our self-efficacy. During this time, people may be making decisions about whether and when to retire. When people feel higher self-efficacy when it comes to preparing for retirement, their goals are clearer and they engage more in productive retirement planning activities (Hoffmann & Plotkina, 2021).

Old Age

Self-efficacy reassessments in old age are difficult. For many people, declining mental and physical abilities and retirement from work or continued work amid expectations that they should retire may force a new round of self-appraisal. The effects of these changes or even just beliefs about these changes can come from within or outside a person.

A lowering of self-efficacy can further affect physical and mental functioning in a kind of self-fulfilling prophecy. For example, in a study of adults in the Netherlands, average age 66, the people who believed that their memory was getting worse performed significantly less well on tests of memory functioning six years later than did those whose sense of self-efficacy included the belief that their memory capabilities were high (Valentijn et al., 2006). Similarly, in research with older adults in Switzerland, when faced with a challenging memory task, people with higher memory self-efficacy persisted and performed better than people with lower memory self-efficacy, who stopped trying more quickly (Beaudoin & Desrichard, 2016). Older adults in Australia who engaged in physical exercise felt more exercise self-efficacy (and vice versa), and the higher those levels, the lower people's levels of depressive symptoms (Miller et al., 2019).

But stereotypes also play a role. In a study with over 4,600 employees in the banking sector in Italy, researchers found that people held negative organizational stereotypes about the abilities of older employees, and these stereotypes were associated with lower self-efficacy for older employees (Chiesa et al., 2016).

To Bandura, self-efficacy is the most important factor in determining success or failure throughout the entire life span.

Pause for Reflection

How has your self-efficacy changed over time? What events shaped your self-efficacy?

Self-Efficacy and Positive Outcomes

We have already discussed how mastery of skills, achievement, and feedback from others can boost our self-efficacy in diverse domains of life. The direction also goes the other way: Having strong feelings of self-efficacy can support mastery of skills and achievement in diverse domains of life, from school and work, to physical and mental health.

Academic Outcomes

There is a significant positive relationship between self-efficacy and academic performance. Self-efficacy in students has been positively related to motivation, level of effort, level of aspiration, and persistence in classroom situations (e.g., Bassi et al., 2007; Gibson & Dembo, 1984; Multon et al., 1991; Zimmerman, 1995). Unsurprisingly, then, across different ages, self-efficacy predicts academic success. For example, American middle school students with higher social self-efficacy did better in school than students with lower social self-efficacy (Raskauskas et al., 2015). South Korean 7th and 9th graders' expectations for their final grades related to their self-efficacy: Students with higher academic self-efficacy expected higher final grades (Won et al., 2017). Similarly, Norwegian college students with higher self-efficacy earned higher grades than those with lower self-efficacy (Firth et al., 2019). In a longitudinal study of first-year university students in the United States, individuals' academic self-efficacy was associated with the vividness with which they could picture their graduation and life after graduation as well as their cumulative grade point averages (GPAs) over time (McMichael et al., 2022).

Bringing together social learning and five factor of personality theories, researchers examined how the big five personality traits and self-efficacy related to academic performance in almost 900 university students from the United States and South Korea (Stajkovic et al., 2018). Conscientiousness and emotional stability (the inverse of neuroticism) were positively associated with self-efficacy, which in turn, was positively associated with success in college courses (final grades). Put another way, people higher in conscientiousness and emotional stability felt better able to excel in their classes, and they did excel in their classes.

Self-efficacy is important for teachers' performance as well. Classroom teachers in Germany who were high in self-efficacy were rated by their students as being more effective teachers than those low in self-efficacy. In addition, those whose students rated them high in quality of classroom instruction developed higher levels of self-efficacy (Holzberger et al., 2013).

Occupational Outcomes

Self-efficacy facilitates well-being and success at work, too. Early work on self-efficacy found that it affects the amount of time spent job hunting as well as future job success. Employees high in self-efficacy set higher personal goals and are more committed to them than employees low in self-efficacy. Those high in self-efficacy tend to focus on analyzing and solving problems on the job. Those low in self-efficacy focus on personal deficiencies and the fear of failure, which can undermine their productivity (Locke & Latham, 1990). Similar results have been demonstrated more recently: People high in self-efficacy are much more likely to be more fully engaged in their work and to experience less burnout from their jobs (Ventura et al., 2015). This may be in part due to people's feeling empowered. In a study of Master of Business Administration (MBA) students across four universities in China, the more empowered to control their work individuals felt, the more self-efficacy they felt, and, as a result, the more likely they were to engage in proactive work behaviors (Huang, 2017).

The significant positive relationship between self-efficacy and job performance was supported by an early meta-analysis of 114 research studies involving more than 21,600 participants. The higher the level of self-efficacy, the better was the performance on the job (Stajkovic & Luthans, 1998). This effect has been replicated across diverse people in diverse occupations. For example, in a study of employees from 15 heterogeneous

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Self-efficacy is associated with success in academic and occupational domains, as it encourages investment in the work.

Korean electronics, telecommunications, and manufacturing companies, the people with higher general self-efficacy performed their work tasks better than people with lower self-efficacy (Chae & Park, 2020).

Certain work environments are more supportive of self-efficacy and those high in it than others. Those high in self-efficacy perform better when they receive greater feedback about their job performance. They often do not perform well in situations that provide little or no feedback. In other words, not knowing how well they are doing can be a negative factor for people who score high in self-efficacy (Schmidt & DeShon, 2010). Thus, self-efficacy predicts both enjoyment of and success in one's work. Other research has demonstrated that people high in self-efficacy are more successful in job training programs and report higher levels of job satisfaction, organizational commitment, and job performance than do people who are low in self-efficacy (Gupta et al., 2013; Salas & Cannon-Bowers, 2001).

Health

Self-efficacy also affects constituent experiences and behaviors associated with physical and psychological well-being.

Pain Tolerance

Some people may have to deal with physical pain that comes with illness, injury, or their treatment. Self-efficacy can support the coping process. One idea is that coping techniques that improve self-efficacy produce increases in endorphins, which are the body's natural painkillers.

One early study on chronic pain examined the experience of patients with lower back pain. After six months in a rehabilitation program, patients higher in self-efficacy reported better physical functioning and less back pain than did patients lower in self-efficacy (Altmaier et al. 1993). Other research supports the positive relationship between self-efficacy and pain tolerance. One study of more than 15,000 patients in China found that those higher in self-efficacy suffered less impairment, emotional distress, and severity of pain than those who were lower in self-efficacy (Jackson et al., 2014). In a sample of nonpatient undergraduate students from Norway, self-efficacy was associated with lower pain intensity and unpleasantness as well (Firth et al., 2019).

Health Behaviors

Self-efficacy is also related to the maintenance of healthy behaviors. Bandura wrote that:

> Life-style habits can enhance or impair health. This enables people to exert some behavioral control over their vitality and quality of health. Efficacy beliefs affect every phase of personal change—whether people even consider changing their health habits; whether they enlist the motivation and perseverance needed to succeed should they choose to do so; and how well they maintain the habit changes they have achieved. (Bandura, 1995, p. 28)

Self-efficacy supports engagement in health behaviors across the life span. One study focused on over 550 kindergarten children and their parents in Germany who participated in a health promotion program (Kieslinger et al., 2021). The children of parents who felt high parental self-efficacy after this program subsequently engaged in more physical activity than the children of parents who felt low parental self-efficacy. As we have learned, parents' self-efficacy predicts children's self-efficacy.

It has also been found, that the use of techniques for enhancing feelings of self-efficacy among adults 60 years and older led to increased levels of physical activity. Those whose self-efficacy remained lower led more sedentary, unhealthy lives (French et al., 2014). Similar results emerged in a study of women with cardiovascular disease in rehabilitation: Those with higher self-efficacy had more optimistic outcome expectations and engaged in more physical activity after rehab (Blanchard et al., 2015).

Health behaviors also include sticking with one's medication schedule to maintain health. For example, people with Type 2 diabetes who felt they had more efficacy in controlling their health did a better job of managing the disease by adhering to their medication schedule and had better outcomes in terms of blood sugar as a result (Gonzalez et al., 2015).

Self-efficacy also protects against engagement in unhealthy behaviors. For example, a study of Native American and Native Alaskan adults found a relationship between self-efficacy and alcohol use. The lower the level of self-efficacy, the greater the alcohol consumption (Taylor, 2000). In the case of cigarette smoking, studies of adolescents have demonstrated that the higher their self-efficacy, the more resistant they are to peer pressure to start smoking (Schwarzer & Fuchs, 1995; Stacy et al., 1992).

Recovering from Illness

Given self-efficacy's support of health behaviors, it can also support recovery from illness or injury. As we discussed previously, self-efficacy facilitates recovery from or maintenance amid illness, as in cardiovascular disease (Blanchard et al., 2015) and diabetes (Gonzalez et al., 2015). Indeed, other research done in Italy has also found that

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Self-efficacy encourages healthy behaviors and, in turn, supports physical and mental health.

people with diabetes high in self-efficacy were far more likely to persist in their self-care treatment programs than were those low in self-efficacy, and this supported maintenance of their health (Mishali et al., 2011).

Multiple studies, in the United States and Italy, have demonstrated that people with higher self-efficacy recover more effectively from heart attacks than people lower in self-efficacy, and this has to do with their being more likely to engage in healthy behaviors (Greco et al., 2015; Kaplan et al., 1984).

Adult patients recovering from orthopedic surgery (hip or knee replacement) who scored high in self-efficacy performed significantly better in rehabilitation therapy programs than did those low in self-efficacy (Waldrop et al., 2001).

Mental Health Self-efficacy serves to buffer people from life stressors and is positively associated with psychological well-being. Research with children, adolescents, and adults has tied higher self-efficacy to lower depression, anxiety, and neuroticism in the United States (Bandura et al., 1999), the Netherlands (Muris, 2002), China (Li, 2010), and Nigeria (Onyeizugbo, 2010). In a study of Muslim Arab college students in Kuwait, people higher in general self-efficacy had better mental health and felt happier in life (Abdel-Khalek & Lester, 2017). Another study that focused on coping with the COVID-19 pandemic in over 600 adults found that those high in general self-efficacy employed less passive coping strategies and more active coping strategies, and this was associated with better mental health (Zhou et al., 2021). Other work demonstrated that U.S. military veterans who had engaged in combat but had higher, versus lower, self-efficacy had less severe PTSD (Blackburn & Owens, 2015). Self-efficacy was also a protective factor against depression in that study.

Self-efficacy may support mental health in part because it energizes productive coping strategies. Put another way, enhanced self-efficacy and a sense of control over life events are positively related to the ability to cope with stress and to minimize its harmful effects on physiology and psychology. Bandura wrote, "A strong sense of coping efficacy reduces vulnerability to stress and depression in taxing situations and strengthens resiliency to adversity" (Bandura, 2001, p. 10). High self-efficacy has been associated with strengthening the body's immune system, lowering the release of stress-related hormones, and reducing susceptibility to respiratory infections.

A study of refugees migrating from East to West Germany after the destruction of the Berlin Wall in 1990 found that people higher in self-efficacy adapted significantly better to the change from an economically disadvantaged lifestyle under a communist system to a more affluent lifestyle under a capitalist system.

> Perceived self-efficacy proved to be a powerful personal resource regarding the impact of migration stress on cognitive appraisals as well as on psychological and physical wellbeing. . . . Highly self-efficacious migrants perceived the demands in their new life more as challenges and less as threats. They experienced lower anxiety, better health, and fewer health complaints than low self-efficacious migrants. (Jerusalem & Mittag, 1995, p. 195)

Among adults in the Netherlands who had experienced facial disfigurement as a result of treatment for cancers of the head or neck, those who measured lower in self-efficacy experienced higher levels of stress in response to unpleasant or rejecting behaviors of other people. Those who scored higher in self-efficacy experienced less stress because they believed they could exercise some control over how other people reacted to them (Hagedoorn & Molleman, 2006). Thus, self-efficacy supports mental health and coping.

Pause for Reflection

What are three positive behaviors you engage in? How has self-efficacy played a role?

Collective Efficacy

Just as an individual may develop a sense of self-efficacy, a group of people working together in a common enterprise to achieve specific goals may develop a sense of collective efficacy (Dithurbide & Feltz, 2012). For example, a sports team, a family, a class, a department within a large organization, a military combat unit, a group of neighbors uniting to deal with a litter problem in their area can engender the strong feeling that they will be able to overcome obstacles and achieve their goals.

Teams The value of collective efficacy has been studied in college basketball teams. It was demonstrated that a high sense of collective efficacy arose in teams that had highly competent leaders early in the season and that had won most of their games in the previous season. Teams with the highest collective efficacy at the beginning of the new season placed better in end-of-season standings than did teams that scored low in collective efficacy (Watson et al., 2001).

Families High levels of collective efficacy in families have been found to result in more open family communications, more truthful disclosures by teenagers to their parents, and a greater sense of satisfaction with family life by both parents and children (Bandura et al., 2011).

Schools Collective efficacy can benefit people in the school context as well. High collective efficacy among teachers in the Netherlands led to higher student achievements and better grades (Moolenaar et al., 2012). Higher collective efficacy among middle and high schoolers was associated with less bullying in the United States (Williams & Guerra, 2011) and Greece (Sapouna, 2010). More recent research suggests that collective efficacy at the group level and defender self-efficacy at the individual level combine to increase defending against bullying (Thornberg et al., 2020).

Neighborhoods The feeling of high collective efficacy in a neighborhood has been linked to decreases in alcoholism, drug use, violence, and criminal behavior (including murder) (Ahern et al., 2013; Fagan et al., 2014; Maxwell et al., 2011).

Organizations The collective efficacy of companies was related to higher job performance and helping behavior among employees and to less stress in the workplace. These findings have been found in Western and Eastern cultures (Du et al., 2015; Esnard & Roques, 2014). Relatedly, across about 3,000 employees and supervisors in technology companies in China, higher collective efficacy was associated with better team performance (Li et al., 2020).

In Italy, air force military personnel who demonstrated higher collective efficacy scored higher in commitment to their organization and satisfaction with their job than those in units with low collective efficacy (Borgogni et al., 2010).

Alex Trautwig/Getty Images

Collective efficacy is associated with teams' reaching their goals. Despite being one of the lowest paid teams in major league baseball, the Tampa Bay Rays perform as well as high-paid teams, likely due in part to collective efficacy.

Diversity and Self-Efficacy

Research has also examined how cultural differences as well as personal identities and self-efficacy are intertwined and affect other outcomes. For example, high school students in Iran who had a higher sense of ethnic identity had a higher level of self-efficacy than did those with a poor sense of ethnic identity (Hejazi & Hasany, 2014).

Cultural Diversity and Academic Self-Efficacy

In a study of middle school students in Korea, the Philippines, and the United States, researchers found that students from different cultures weighed some sources of information about academic math self-efficacy differently than others (Ahn et al., 2016). Specifically, students from the United States felt higher self-efficacy than students in the two collectivistic countries. For the Korean and U.S. students, self-efficacy was similarly predicted by vicarious experience

from their teachers and social persuasion by peers and family members. In contrast, Filipino students' self-efficacy was most closely tied to social persuasion from their peers. To support diverse students' academic self-efficacy and positive outcomes, educators can incorporate culturally familiar tasks. For example, another study with majority Latino/a seventh graders in the United States demonstrated that engaging students in a culturally familiar reading task can increase their reading self-efficacy (Kelley et al., 2015).

Racial and Ethnic Diversity and Academic Self-Efficacy

Negative stereotypes about people of color's ability can cause stress and additional challenges for individuals who identify as members of those minoritized groups. In this context, self-efficacy is also important. In a study of Latina women in university, researchers found that students with high college stress or minority status stress felt less able to continue in their studies than students who had lower stress levels; but this only occurred if the women had relatively low self-efficacy (Arbona, 2016). That is, for women who had high academic self-efficacy, college and minority status stress affected their intentions to persist in college less negatively than to women who had low academic self-efficacy. Stressors about academic and occupational outcomes begin earlier than college, though. In a study of high school students of color in a high-poverty city in the United States, students anticipated a hostile racial employment climate, which was associated with lower career decision self-efficacy and vocational outcome expectations (Conkel-Ziebell et al., 2019).

Gender and STEM Self-Efficacy

There are more men than people of other genders in science, technology, engineering, and mathematics (STEM) fields, despite no real differences in performance. Instead, the problem is stereotyping about people who are not men, namely, women. For example, there is a pernicious and problematic stereotype that men can be brilliant, but women tend not to be (e.g., Bian et al., 2017, 2018). Of course, this is not true: Girls and women score similarly to men on standardized tests and tend to outperform boys and men in school. Women's knowledge of or internalization of this sort of stereotype may affect their self-efficacy and, in turn, participation in STEM fields. For example, in a review of the scientific literature, scholars conclude that self-efficacy is a key factor in determining girls' performance at the high end of math, which is integral to math careers (Schwery et al., 2016). Intervening on math self-efficacy can support girls' interest in STEM. A study of over 3,000 Chinese middle and high school students demonstrated that girls reported lower self-efficacy than boys, and this was associated with lower STEM interest and career motivation. This effect was strongest among students who strongly believed in stereotypes about gender roles (Chan, 2022). According to Bandura's view, role models might help support the self-efficacy of women, which we discuss in this chapter's DEI Spotlight.

Immigration and Parental Self-Efficacy

Immigrant families face many challenges in transitioning to a new place, culture, and people after leaving their homes for reasons often entailing danger, poverty, and oppression concerns. Adult immigrants with children still strive to provide positive parenting for their children during this time. A systematic review focused

Highlights

Research on Observational Learning and Self-Efficacy

Observational learning shapes behaviors, for better or for worse, having to do with the following:

- Aggression
- Scholastic learning
- Helping in the workplace
- Honesty
- Health
- Donating money and time

Observational learning occurs from many sources:

- TV shows
- Movies
- Video games
- Parents and families
- Teachers
- Peers

Self-efficacy is associated with better outcomes in many areas:

- Academics
- Occupations
- Physical health
- Mental health

on persons self-identifying as immigrants (declared nationality other than the country of residence) who were also parents in the United States, Canada, Israel, and Turkey from Latin American and Mexico, Asia, the Soviet Union, and Syria (Boruszak-Kiziukiewicz & Kmita, 2020). That analysis found that keeping parental self-efficacy high during the initial period of immigration was difficult, but that parental self-efficacy was associated with more supportive parenting.

Pause for Reflection

Why do you think self-efficacy is especially important for people with diverse identities or of diverse cultures?

Behavior Modification via Modeling Therapy

Bandura's goal in developing his social-cognitive theory was to modify or change those learned behaviors that are problematic or maladaptive. Like Skinner's approach to therapy, Bandura focused on external aspects given that those problematic behaviors were learned, just as all behaviors are learned. Bandura did not attempt to deal with any underlying unconscious conflicts. It is the behavior or symptom, rather than any presumed internal drive, that is the target of the social-learning approach.

This approach has been effective with phobias, obsessive-compulsive disorders, and sexual dysfunction. It can be employed with the model in person or by playing a video of the model. The positive effects have been reported to last for years. Considerable research has been conducted on self-efficacy during and after behavior modification therapy. The results have found that as people's self-efficacy improved during treatment, they were increasingly able to deal with the source of the fear. It was the therapeutic procedure itself that enhanced self-efficacy.

Bandura developed three forms of behavior therapy: modeling, guided participation, and covert modeling. We will discuss examples of these approaches in dealing with fears, phobias, and anxieties.

Fears and Phobias

If modeling is the way we learn our behaviors originally, then it should also be an effective way to relearn or change behavior. Bandura applied modeling techniques to eliminate fears and other intense emotional reactions. In one early study, children who were afraid of dogs observed a child of the same age playing with a dog (Bandura et al., 1967). While the participants watched from a safe distance, the model made progressively bolder movements toward the dog. The model petted the dog through the bars of a playpen, then went inside the pen and played with the dog. The observers' fear of dogs was considerably reduced as a result of this observational learning situation.

In a classic study of snake phobia, Bandura and his associates eliminated intense fear of snakes in adults (Bandura et al., 1969). The participants watched a film in which children, adolescents, and adults made progressively closer contact with a snake. At first, the filmed models handled plastic snakes, then touched live snakes, and finally let a large snake crawl over their body. The participants with snake phobias were allowed to stop the film whenever the scenes became too anxiety-inducing. Gradually, their fear of snakes was overcome. The technique called *guided participation* involves observing a live model and then participating with the model in a similarly incremental way.

Modeling is effective even in the absence of an observable model. In *covert modeling*, individuals are instructed to imagine a model coping with a feared or threatening situation; they do not actually see a model. Covert modeling has been used to successfully treat snake phobias and social inhibitions.

You may not think that a fear of snakes is so terrible, but overcoming this fear has brought about significant changes in many people's lives, even for those who never encounter snakes. In addition to bolstering self-esteem and self-efficacy, eliminating a snake phobia can alter personal and work habits. A woman was able to wear a necklace for the first time after

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Modeling behavior to help treat phobias can now be done via VR.

modeling therapy. Previously she had not been able to do so because necklaces reminded her of snakes. A realtor treated successfully for snake phobia was able to increase his income because he no longer feared visiting properties in rural areas. Many other people with phobias treated by modeling therapy were freed from nightmares about snakes.

Phobias restrict our daily lives. Many people who fear spiders react with rapid heartbeat, shortness of breath, and vomiting just from seeing a picture of a spider. People with phobias may doubt their self-efficacy in these fear-provoking situations and may have little confidence in their ability to deal with the source of the phobia. To relieve people of these fears greatly expands their environment and increases their self-efficacy. For example, modeling therapy has been adapted to be administered in virtual reality (VR), which was found to be highly effective in treating fear of spiders (Leehr et al., 2021).

Modeling techniques can be applied in therapeutic treatment of many different kinds of phobias. Research has demonstrated the efficacy of modeling exposure therapy to treat fear of worms (Herdiansyah & Sumampouw, 2017). As another example, one study focused on self-efficacy and contamination fears, which can be present and debilitating for individuals with obsessive-compulsive disorder (OCD) (Merling et al., 2022). In a contamination-related behavioral approach task, people with higher contamination-relevant self-efficacy engaged in more approach behavior. Additionally, people whose self-efficacy was encouraged before the task experienced less anxiety during the task. Another study using the guided method in VR helped reduce people's fear of heights (Caravas et al., 2020).

Pause for Reflection

Have you experienced anxiety or stress that has been lowered by observing another person deal with the source of anxiety or stress?

Ethical Considerations in Behavior Modification

Although the results of behavior modification are impressive, the techniques have drawn criticism from some educators, politicians, and even psychologists. They suggest that behavior modification exploits people, manipulating and controlling them against their will. Bandura argued that these charges are misleading. Behavior modification does not occur without the client's awareness. Indeed, self-awareness and self-regulation are vital for the effectiveness of any program to change or relearn behaviors. In other words, behavior-modification techniques will not be successful unless the person is able to understand what behaviors are being reinforced. They are not being treated against their will.

Further, the therapy clients themselves decide what they want to change. They are not being controlled by anyone else. People come to a therapist to eliminate specific fears and anxieties that inhibit their ability to function or to cope with daily life. Bandura noted that the client–therapist relationship is a contract between two consenting individuals.

Bandura also explained that far from manipulating people, modeling techniques actually increase personal freedom. People who are afraid to leave the house or who have a compulsion to wash their hands continually are not truly free. They are living within the constraints imposed by their phobic or compulsive behavior. Those constraints allow little choice. Removing the constraints through behavior-modification techniques can increase their freedom and the opportunity for personal growth.

Questions About Human Nature

Bandura's position is clear on the issue of free will versus determinism. Behavior is controlled by the person through the cognitive processes, and by the environment through external social situations. Bandura calls this view **reciprocal determinism**. He noted that people are neither "powerless objects controlled by environmental forces nor free agents who can become whatever they choose. Both people and their environments are reciprocal determinants of each other" (1977, p. vii).

Reflections on Bandura's Theory

Social-learning theory focuses on overt behavior. Critics charge that this emphasis ignores distinctly human inner aspects of personality such as motivation and emotion.

reciprocal determinism The idea that behavior is controlled or determined by the individual, through cognitive processes, and by the environment, through external stimuli.

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Bandura understood the importance of role models, and modern scholars underscore how important they are in raising the self-efficacy and interest of diverse students, such as in STEM.

However, Bandura's theory allows for a focus on cognitive processes and beliefs in the form of self-efficacy.

The social-learning approach has several distinct advantages. First, it focuses on objective behaviors and is amenable to laboratory methods of investigation, making it compatible with modern standards of scientific rigor. Relatedly, Bandura's approach boasts a great amount of empirical support. This is particularly true for his proposition that people learn from other people's modeling behavior and that self-efficacy plays a big role in behavior. Research continues to confirm the usefulness of these constructs in the laboratory, in real-world situations, and as part of behavior modification programs.

Second, observational learning and behavior modification are compatible with a functional, pragmatic approach to psychological science. More readily than other approaches, observational-learning techniques can be taken from the laboratory and applied to practical problems. The techniques also provide more immediate reinforcement for the practitioner than do other approaches. For example, in clinical situations, dramatic changes can be seen in client behavior within weeks or even days.

We can see the effectiveness of role models in ample research as well as in our everyday lives. Bandura's work put a magnifying glass to the types of behaviors that are modelled in shows, movies, and video games. This was a huge contribution, one of Bandura's many. It is unsurprising that many researchers and clinicians apply and build on Bandura's theories today.

Pause for Reflection

Are there other strengths and weaknesses of Bandura's theory not discussed already?

DEI Spotlight

Bandura's Theory and Diversity, Equity, and Inclusion

Bandura's theory focuses on how people learn behaviors by observing the behaviors and consequences of others and on individuals' self-efficacy as a source of strength in accomplishing goals. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individuals, Families, and Society. Individuals, families, and society will benefit from equal opportunity for all people. But opportunities can be limited by the stereotypes about individuals with minoritized group membership, both through the behavior of those holding stereotypes and through the behavior of individuals who have internalized those stereotypes and feel lower self-efficacy as a result. How can this injury to self-efficacy be reversed? Role models.

Thus, here we focus on the benefit of role models to correcting the underrepresentation of women and people of color in academic and occupational fields that are thought to require "brilliance," such as STEM fields and philosophy (e.g., Leslie et al., 2015; Storage et al., 2016). Unfortunately, pernicious and problematic stereotypes about brilliance as being something that White men, but not others, have has undermined the self-efficacy of women, people of color, and especially, women of color in the context of STEM fields. It is important that all people capable of doing science are not discouraged from it and have the opportunity to do it. And, indeed, empirical work confirms that people of all genders and races/ethnicities are capable of engaging in STEM to the same extent.

Conceptions of and research on role models go beyond just modeling behavior and extend to expanded representations about what the self is capable of. Role models can be understood as persons who provide an example for the goals, attitudes, or behavior of an individual observer; it is important that the observer identifies with

DEI Spotlight, continued

Bandura's Theory and Diversity, Equity, and Inclusion

the role model (Almquist & Angrist, 1971; Merton, 1957; Morgenroth et al., 2015).

Research has demonstrated that role models can support the broadening of interests and inspiration to pursue goals in STEM fields for women and people of color, with interventions spanning from childhood to early adulthood.

Women role models support students', especially other women's, STEM performance, engagement, interest, and majoring in a field in college (e.g., Bettinger & Long, 2005; Dee, 2007; Griffith, 2014; Rask & Bailey, 2002; Solanki & Xu, 2018).

Self-efficacy is key here. Interventions that expose young adult women to STEM role models increase their self-efficacy as well as their positive attitudes toward career aspirations and performance in STEM (e.g., Herrman et al., 2016; Marx & Roman, 2002; Stout et al., 2011).

Likewise, research has demonstrated that students of color really benefit from role models in STEM with whom they can identify—namely, other people of color that they know versus famous people they don't know (Steinke et al., 2021).

Applying the tenets of Bandura's social-cognitive theory and centering self-efficacy, scholars implemented an after-school program for students from the Boys and Girls Club (King Miller et al., 2021). This program was designed to teach literacy, science, and math, incorporating knowledge and skill lessons and featuring Black scientists and inventors. Students participated in this program for 10 weeks with two 1.5-hour sessions per week. Participants did

> hands-on math and science activities and literacy activities that, when possible, intentionally included characters that were of African descent. The literacy strategies included: storytelling, reading picture storybooks and graphic novels, writing assignments, and discussions. Science activities included: testing for conductors and insulators, constructing electrical circuits, testing liquids to determine which liquid was water; making models to demonstrate the water cycle, and using K'Nex to build models. Mathematics activities included: graphing data, using Lego Robots to learn about proportions and apply Newton's Laws of Motion, and building models. (p. 265)

The final product of students' work was a science fair project. Not only did this study implement behavioral modeling, but it also presented students with role models that they could identify with. More, by engaging students in hands-on scholarly activities and supporting them along the way, the program increased students' self-efficacy in science and math. The authors conclude,

> Using Bandura's (1995) theory of self-efficacy as a gauge, evidence emerged that supported student increase in self-efficacy resulting from their confidence in scientific content knowledge acquisition. This was revealed through three components. First, there was evidence of an increase in their communication. Whether verbal or written, students demonstrated a positive change in their self-efficacy by their increased participation in the activities. Second, there was a connection to literacy that incorporated role models that looked like the students, which the students often referred to in their writing and discussion. Finally, there was willingness on the part of the students to participate in the science fair presentation. (p. 271).

At the intersection of race and gender, women of color can especially benefit from role models in STEM (Scott-Johnson & Leggett-Robinson, 2020) as they are particularly underrepresented in STEM (Towns, 2010).

For individuals and society, these disparities are problematic both because they limit the range of ability, perspectives, and diverse skills applied to STEM work and are an injustice in light of equal abilities and motivations across diverse people. Not all families have or know a professional in STEM, such that programs and interventions that apply Bandura's theories like the one discussed here are essential for providing modeling of success in STEM.

Chapter Summary

Behavior can be learned through vicarious reinforcement by observing the behavior of others and anticipating the rewards for behaving in the same way. Cognitive processes are the mediating mechanisms between stimulus and response and bring about control of behavior through self-regulation and self-reinforcement. Bandura assessed and those who continue to build on his work assess behavior and cognitive variables through direct observation, self-report inventories, and physiological measures.

In the classic Bobo doll study, children patterned their behavior on the model's aggressive behavior whether the model was observed live, on television, or in a cartoon. Disinhibition involves weakening an inhibition, most often against maladaptive and antisocial behaviors, through exposure to a model. Much research finds that children and adults will copy an aggressive model, including those presented in shows, movies, and video games. But there is a bright side to social-cognitive learning via modeling. People also learn productive, adaptive, and prosocial behaviors from modeling, such as in school or with the family.

Three factors that influence modeling are the model's characteristics, the observer's characteristics, and the behavior's reward consequences. Observational learning is governed by attentional, retention, production, and incentive and motivational processes.

The self is a set of cognitive processes concerned with thought and perception. Self-reinforcement requires internal performance standards against which to evaluate behavior and then aiming to change one's behavior by applying rewards, punishment, or negative reinforcement. Self-efficacy refers to the perception that one can control life events effectively through one's behavior. People low in self-efficacy may feel helpless and give up more quickly when faced with obstacles, whereas people who score high in self-efficacy persevere at tasks and perform at a higher level. Judgments of self-efficacy are based on performance attainment, vicarious experiences, verbal (social) persuasion, and emotional responses and physiological arousal. Using these information sources, it is possible to increase self-efficacy.

Self-efficacy increases across the life span with experience but decreases somewhat at life phases that pose new challenges (e.g., going off to college in young adulthood, retiring in mid- to late-adulthood, and dealing with cognitive and physical decline in older age). Infants and children are reinforced primarily by physical stimuli. Older children are reinforced more by others' approval or disapproval; this is internalized so that reinforcement becomes self-administered.

Self-efficacy predicts positive outcomes in various domains, including academic and occupational, physical and mental health, and cooperative group contexts. Self-efficacy is intertwined with racial, ethnic, and cultural identities and can serve as a buffer against the challenges that come with minoritized identities.

In behavior therapy, models are used to demonstrate ways of coping with fear-inducing situations. Behavior can be modified through observation and guided participation. In covert modeling, subjects imagine how a model copes with a feared situation. Bandura's approach to behavior modification deals with overt behavior and cognitive variables, particularly self-efficacy. As self-efficacy improves during treatment, the client is increasingly able to deal with fear-inducing situations.

Combining insights from the social-cognitive theory, we understand how important positive role models are to demonstrate specific behaviors and also to demonstrate that diverse people are capable of excelling in all contexts, a buffer against discouragement from other sources. For example, stereotypes about women's intelligence may affect their participation in academic and occupational opportunities tied to STEM fields, but role models can serve as a buffer against them, increasing their self-efficacy and engagement.

Behavior is controlled by internal cognitive processes and external stimuli; a position Bandura calls reciprocal determinism. Most behavior is learned, and genetic factors play only a minor role. Learning in childhood may be more influential than learning in adulthood, but adults are not victims of childhood experiences. From Bandura's view we might think our ultimate goal is to set realistic performance standards to maintain an optimal level of self-efficacy.

Criticisms of Bandura's theory relate to his focus on overt behavior and cognitive processes to the exclusion of emotions and conflicts. Nevertheless, social-learning theory and the successful use of modeling to change behavior remain extremely popular and are empirically supported.

Review Questions

1. In what ways does the observational-learning (or social-learning) approach to personality differ from the other approaches we have discussed?
2. What is Bandura's position on the role of reinforcement in learning?
3. Outline the procedure and results of three of Bandura's early studies on modeling.
4. What is disinhibition, and what role does it play in problematic and antisocial behavior?
5. List five research findings on disinhibition, observational learning, and antisocial behavior.
6. List five research findings on observational learning and productive and prosocial behavior.
7. Describe the role of cognitive processes in social learning, touching on each of the following: attentional, retention, production, and motivational processes.
8. Define self-reinforcement, and provide three examples of self-reinforcement strategies.
9. What is self-efficacy, and why is it important for productive behavior?
10. On what sources of information do we base our judgment about our own level of efficacy?
11. Discuss the developmental changes that occur in self-efficacy from infancy to old age.
12. List three research findings on how self-efficacy predicts positive outcomes in each of the following domains: academics, occupations, and health.
13. What is collective efficacy? What are three examples of contexts in which collective efficacy functions?
14. Discuss the role of self-efficacy for people with diverse identities and of diverse cultures.
15. How can role models support productive behaviors?
16. Describe the guided participation and the covert modeling approaches to behavior modification in modeling therapy.

Suggested Readings

- Bandura, A. (Ed.). (1995). *Self-efficacy in changing societies.* Cambridge University Press. Discusses various ways in which self-efficacy beliefs shape lifestyles and goals. Considers these issues from life-span and social-cultural perspectives.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman. Describes 20 years of research on the idea that we can accomplish what we truly want to accomplish; we are capable of consciously directing our actions to achieve success. Extends the concept of efficacy to society at large—to political beliefs, social practices, and collective action.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, *52*, 1–26. Discusses the basis of social-cognitive theory as the capacity to exercise control over the nature and quality of one's life.
- Bandura, A. (2013). The role of self-efficacy in goal-based motivation. In E. Locke & G. Latham (Eds.), *New developments in goal setting and task performance* (pp. 147–157). Routledge/Taylor & Francis. Bandura's views, at age 88, of the role of self-efficacy in determining life goals and the standards we set for ourselves.
- Evans, R. (1989). *Albert Bandura: The man and his ideas: A dialogue.* Praeger. A detailed interview about many aspects of Bandura's life and work.

Part 9

The Limited-Domain Approach

It is easy to see why the global theory approach to personality characterized the field for so long. The early theorists focused on whole persons, largely within the context of therapy, so that they could understand people's functioning in diverse contexts.

The focus began to shift away from the whole person when the study of personality was brought out of the clinic and into the research laboratory. This has given rise to a newer, limited-domain approach to personality that is more restricted in scope. Experimental psychologists typically study only one (or a few) variable(s) at a time, controlling or holding constant others. In this way, they concentrate on a limited area of investigation so as to isolate effects and make clearer conclusions.

Proponents of these limited-domain theories place less emphasis on the therapeutic value of their ideas. Typically, they are researchers, not clinicians, and as a result are more interested in investigating personality in a more general population than in changing it in a specific population. This does not mean that this limited-domain approach offers no treatment applications. Rather, these theories were not developed specifically for use with patients, whereas many of the earlier personality theories emerged from and informed therapeutic contexts.

In this chapter, we discuss some specific personality traits that have been the focus of much systematic study: locus of control, sensation seeking, learned helplessness, optimism–pessimism, and happiness. They reflect two approaches we discussed earlier—the trait approach and the social-learning (social-cognitive) approach.

Chapter 14

Julian Rotter

Marvin Zuckerman

Martin E. P. Seligman

Personality in Taking Control, Taking Chances, and Finding Happiness

Learning Objectives

14.1 Compare and contrast focused, limited-domain personality theories with those of psychoanalysts, developmental stage theorists, and humanists, providing two examples of similarities and differences for each.

14.2 Define locus of control.

14.3 Outline the developmental trajectory of locus of control.

14.4 Identify the correlates of locus of control.

14.5 Define sensation seeking.

14.6 List the developmental changes across the life span in sensation seeking.

14.7 Compare and contrast the different types of sensation seeking.

14.8 Summarize the correlates of sensation seeking.

14.9 Define learned helplessness.

14.10 Define optimism and pessimism.

14.11 Explain how learned helplessness is linked to optimism and pessimism.

14.12 Describe the developmental trajectory of optimism.

14.13 Identify the correlates of learned helplessness and optimism.

14.14 Compare and contrast the different types of happiness.

14.15 List the outcomes across life domains that are associated with happiness.

14.16 Explain how diversity shapes and is related to each of the limited-domain personality traits.

14.17 Summarize how each of the limited-domain personality traits relate to the five factors of personality and to each other.

Julian Rotter: Locus of Control

Rotter (1916–2014) was born in Brooklyn, New York, the youngest of three brothers. He said they "fit quite well into Adler's descriptions of the oldest, the middle, and the 'fighting' youngest child" (1993, p. 273). The family lived comfortably until the 1929 economic depression when Rotter's father lost his business.

This dramatic change in circumstances was a pivotal event for the teenage boy. "It began in me a lifelong concern with social injustice and provided me with a powerful lesson on how personality and behavior were affected by situational conditions" (1993, p. 274).

In high school, Rotter discovered books about psychoanalysis by Freud and Adler. For fun, he began trying to interpret the dreams of his friends, and decided he wanted to become a psychologist. Disappointed to learn that there were not many jobs for psychologists, however, he chose to major in chemistry at Brooklyn College. Once there, he happened to meet Alfred Adler and switched his major to psychology after all, even though he knew it was impractical.

He wanted to pursue an academic career but found out about the widespread prejudice against hiring Jewish faculty in American colleges and universities at the time. This prejudice was not only profoundly problematic, but also striking given that so many important psychologists were Jewish, including Freud, Adler, Erikson, Maslow, and many others not discussed in this text. "At Brooklyn College and again in graduate school," he wrote, "I had been warned that Jews simply could not get academic jobs, regardless of their credentials. The warnings seemed justified" (Rotter, 1982, p. 346).

After Rotter received his PhD in clinical psychology at Indiana University in 1951, he went to work at a state mental hospital in Connecticut. He served as a psychologist with the U.S. Army during World War II and then accepted a teaching position at Ohio State University, where George Kelly was director of the clinical psychology program. At Ohio State, Rotter advanced his social-learning approach to personality and mentored many graduate students.

In 1963 Rotter left Ohio State for the University of Connecticut at Storrs. In 1988 he received the Distinguished Scientific Contribution Award from the American Psychological Association. Well into his 80s, he kept up his vigorous tennis and squash games and his weekly poker sessions (Strickland, 2014). By the time of his death in 2014, he had become "one of the most eminent psychologists of the 20th century" (Rotter, 2014, p. 1).

Perceptions of Internal Versus External Control

Rotter tried to explain personality and behavior by looking both outside and inside the individual, considering external reinforcements as well as internal cognitive processes. In the course of an extensive research program, he found that some people believe that events (reinforcers, such as rewards and punishments) depend on their own actions, whereas others believe that events are controlled by other people and by outside forces. He called this concept *locus of control*.

People who have an **internal locus of control** believe that events are under the control of their own behaviors and abilities. Those with an **external locus of control** believe that other people, fate, or luck control the events of their lives. They are convinced that they are powerless with respect to outside forces.

You can see how locus of control can have a considerable influence on our behavior. People with external locus of control, who believe that their own behaviors and abilities make no difference in the reinforcers they receive or events in their lives, see relatively little value in exerting effort to reach their goals.

In contrast, people with internal locus of control believe their behaviors will lead to reinforcements and events in their own lives and behave accordingly. They tend to put in more effort and persevere over time to reach their goals, which does indeed lead to more desired outcomes. The benefits of an internal, versus external, locus of control play out across the domains of life, for example in school, work, relationships, family, and health.

Assessment of Locus of Control

Rotter developed self-report inventories to assess locus of control. The Internal-External (I-E) Scale (Rotter, 1966) consists of 23 items, each with two choices, from which participants select the one that best describes

internal locus of control A belief that events in life are brought about by our own behavior.

external locus of control A belief that events in life are brought about by other people, fate, or luck.

their beliefs (refer to Table 14.1). It is not difficult to determine which of each pair of alternatives represents an internal or an external locus of control. This scale has been translated into many languages. For example, the I-E scale has been translated into Bangla, the language of Bangladesh (Siraji & Haque, 2022).

Another scale to assess locus of control is the Children's Nowicki-Strickland Internal-External Scale, a widely used 40-item measure that has been translated into two dozen languages (Nowicki & Strickland, 1973; Strickland, 1989). An adult form of the scale is available, as well as a cartoon version for use with very young children, including preschoolers (Nowicki & Duke, 1983).

These and other scales have been adapted or created to measure locus of control in a variety of domains, such as in school, work, relationships, family, and health. Researchers have even developed measures to assess collective locus of control. Similar to the idea of collective self-efficacy, there may be a kind of shared experience of locus of control that defines groups that work together. This was demonstrated in research in Austria on entrepreneurial work teams. The results indicated that teams evincing the highest internal locus of control performed at a far more efficient and effective level than teams lower in internal control (Khan et al., 2014).

Table 14.1 Sample items from the I-E Scale

a. Many of the unhappy things in people's lives are partly due to bad luck.
b. People's misfortunes result from the mistakes they make.
a. One of the major reasons why we have wars is because people don't take enough interest in politics.
b. There will always be wars, no matter how hard people try to prevent them.
a. In the long run people get the respect they deserve in this world.
b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he or she tries.
a. The idea that teachers are unfair to students is nonsense.
b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
a. Without the right breaks one cannot be an effective leader.
b. Capable people who fail to become leaders have not taken advantage of their opportunities.
a. No matter how hard you try some people just don't like you.
b. People who can't get others to like them don't understand how to get along with others.

Source: Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*, 11.

Development of Locus of Control

Attempts to control our external environment begin in infancy, becoming more pronounced between ages 8 and 14, when cognitive capacity has increased to a point where goals can be pursued with more self-control. Evidence suggests that locus of control is learned in childhood and reinforced by parents' behavior (Ahlin & Lobo Antunes, 2015). In an analysis of data from over 14,500 mothers, those who were higher in internal locus of control had babies who developed better habits and outcomes in sleeping, eating, and emotion regulation (Nowicki et al., 2017), presumably because the children learned they have control over their behaviors. Analyzing other variables from that dataset, researchers found that children were more likely to develop an external locus of control when their parents were distracted from parenting (e.g., watching TV instead of attending to the child), whereas parents who were warm and attentive (e.g., cuddled and read to their children) raised children who had more of an internal locus of control (Nowicki et al., 2018). Children whose mothers are depressed and have little formal education or income are likely to develop an external, versus internal, locus of control (Freed & Tompson, 2011). Similarly, children being raised in foster care developed more external versus internal locus of control with respect to academic performance (Jankowska et al., 2015).

Over the life span, people become more internally, versus externally, oriented as they grow older: Internal locus of control increases (and external locus of control decreases) through childhood and young adulthood, reaching a peak in middle age, and declining in older age (Heckhausen & Schulz, 1995; Lachman & Firth, 2004; Lachman et al., 2009; Mirowsky & Ross, 2007). However, cognitive training in old age can serve as a buffer. For example, a study of men and women in the United States, ages 60 to 75, found that their internal locus of control was significantly improved by cognitive training (Wolinsky et al., 2009).

Correlates of Locus of Control

An internal locus of control supports productive behaviors that directly and positively affect the very outcomes people believe they have control over. There then is a positive feedback loop, on average. As a result, there tends to be a positive association between internal locus of control (and negative association between external locus of control) and desired outcomes across domains.

Pause for Reflection

Before we dive into the research, what domains do you think that locus of control affects, and why?

Academic Performance

Research in Korea found that people high in internal academic locus of control (believing they would do well in school) were more likely to persist in an online college program than those who scored low in internal academic locus of control (Joo et al., 2011). A study with university students studying psychology in Kenya demonstrated that those with more internal than external loci of control performed better in their class (Kariuki, 2020). Similarly, in research undergraduates from different colleges in India, students with higher internal locus of control earned higher grades than students with more external locus of control (Mishra & Sahoo, 2018).

This may be because higher internal locus of control comes with more cognitive flexibility and adaptable behavior to meet demands of the goal at hand. For example, in a study of schoolchildren in India, those with higher internal locus of control also had higher self-efficacy and academic engagement (Rajan et al., 2017). Other studies in China and Sweden found that people who measured high in internal locus of control were more able to adapt and commit to change; they also scored higher on tests of mental skills than those with a more external locus of control (Chen & Wang, 2007; Fallby et al., 2006).

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People with an internal locus of control engage in more productive behavior, leading to more success at work and school.

Mental Health

Having an internal, versus external, locus of control is associated with better mental health and psychological functioning and fewer addictive behaviors. People high in internal locus of control are less likely to experience emotion dysregulation or be diagnosed with alcohol use disorder (Owen, 2006). A study of college students in Turkey found that those high in internal academic locus of control were less likely to become addicted to internet use than those who scored low in internal academic locus of control (Iskender & Akin, 2010). High external locus of control has been associated with compulsive hoarding behavior (Benson-Townsend & Silver, 2014). Given that internal locus of control serves as a buffer against addiction, people diagnosed with various kinds of addiction have been found to benefit from therapy that helps them develop a greater internal locus of control (Amram & Benbenishty, 2014).

Other research among diverse populations—including college students, pregnant people, women prisoners, and police officers from around the world—found that those high in external control are more prone to fantasies, anxiety, depression, fear of death on the job (police), psychotic episodes, and hopelessness than individuals high in internal control (Ariso & Reyero, 2014; Asberg & Renk, 2014; Hutcheson et al., 2014; Marcano et al., 2014; Naik & Sundaramoorthy, 2016; Ryon & Gleason, 2014; Samreen & Zubair, 2013). Corroborating those findings, people high in internal control experience less anxiety and depression, are less likely to be lonely or attempt suicide, and find greater meaning in life (Castro et al., 2010; Keltikangas-Jaruinen & Raikkonen, 1990; Kulshrestha & Sen, 2006; O'Neal et al., 2010; Petrosky & Birkhimer, 1991; Spann et al., 2006).

Similarly, people high in internal control exhibit higher levels of good mental health, experience more meaningful lives, and score higher on measures of subjective well-being than those high in external control (Shojaee & French, 2014; Singh & Choudhri, 2014). Other research concluded that high internal locus of control at work was positively related to job satisfaction, commitment, and performance as well as general satisfaction with life (Spyridaki & Galanakis, 2022; Wang et al., 2010).

Internal locus of control may be especially helpful for mental health because it can help people cope with new challenges. A study of teenagers in Israel during the 1990 Persian Gulf War, when frequent explosions of Scud missiles caused widespread injury and destruction, found that the adolescents who scored higher on perceived control experienced significantly less anxiety and fewer stress-related symptoms during the fighting than adolescents who scored lower in perceived control (Zeidner, 1993). Among older cancer patients in the Netherlands, those high in internal control experienced less depression than those high in external control (Aarts et al., 2015). German nurses with higher internal locus of control coped better with stress than nurses with an external locus of control, who reported higher levels of work-related stress and burnout (Schmitz et al., 2000).

When it comes to an important life transition, like transitioning to college, internal locus of control can serve as a buffer to new stress. People just beginning college in Greece who scored high in internal control adjusted more readily to leaving home and living independently than those high in external control (Leontopoulou, 2006). Similarly, a study of first-year college students in Turkey found that those high in internal locus of control were more decisive in new situations, compared to students high in external locus of control (Bacanli, 2006). Internal locus of control was found to be especially important for student athletes' stress management in research with community college attendees in the United States (Watson, 2016). Studies in both Croatia and China found that university students' mental health benefited from internal locus of control because internal locus of control supported self-esteem and coping (Kurtović et al., 2018; Yu & Fan, 2016). Likewise, in research with Turkish college students, people with higher internal control had higher emotional self-efficacy and resilience (Türk-Kurtça & Kocatürk, 2020). Research with nearly 1,200 U.S. undergraduates suggests that the most undermining part of external locus of control for psychological well-being is perceived constraints on one's ability to effect change in one's life (Gore et al., 2016).

Physical Health

Internal locus of control is positively associated with physical health, largely through more health behaviors. This better health is manifest in cardiac health—not only do people with internal locus of control have lower blood pressure and fewer heart attacks on average, but when they do develop cardiac problems, they cooperate better with the hospital staff and are released earlier, as indicted by a study in Norway (Bergvik et al., 2012). Similarly, research with patients recovering from coronary artery bypass surgery found that those high in internal control had achieved a higher level of physical functioning at six weeks and six months after surgery than those low in internal control (Barry et al., 2006). Across these health contexts, people high in internal locus of control have better outcomes because they work better with their healthcare providers. As with cardiac care cancer patients in the Netherlands who were high in external control had more trust in their oncologists than those low in external control (Hillen et al., 2014).

Again we see that personality tends to be linked to better health outcomes through more health behaviors: People with internal loci of control tend to be more cautious about their health and are more likely to wear seat belts, exercise regularly, quit smoking, engage in safe sex practices, and eat in healthy ways, as evidenced by research done around the world, including in the United States, France, Germany, and Africa (Cobb-Clark et al., 2014; Grotz et al., 2011; Gwandure & Mayekiso, 2010; Phares, 1993; Scoffier et al., 2010; Seeman et al., 1985; Segall & Wynd, 1990). Research in Nigeria found that those high in internal locus of control were more likely to undergo screening for cervical and breast cancers (Adebimpe & Oladimeji, 2014). In a cross-cultural meta-analysis of 76 research studies with over 76,500 participants, researchers examined the link between locus of control and health behaviors (Cheng et al., 2016). This examination found that internal locus of control was associated with better perceived personal health and healthier diets.

The benefit of internal locus of control is evident for physical health, but it is also the case that internal locus of control is linked to younger age, culture, and education, as a study in Sweden suggests (Lindstrom, 2011). As with mental health, the most undermining part of external locus of control for physical health has to do with perceived constraints (Gore et al., 2016).

Pause for Reflection

Do you think you have an internal or external locus of control? How does this affect your life?

Diversity and Locus of Control

Ethnicity and Race

Research suggests that people from different racial and ethnic groups have different loci of control, which may result largely from the social and economic treatment

they receive from others and society. A study of teenagers in the United States found that having a more internal locus of control was considered to be more important to the White teens but less so for Latino/a, Asian, and Black teens (Kang et al., 2015). Another study found that individuals born in the Netherlands had relatively more internal loci of control, whereas immigrants from Morocco and Turkey scored much higher on external locus of control (Van Dijk et al., 2013).

Research with Latino/a immigrants to the United States found that those with a higher internal locus of control were better able to adapt to the demands of the new culture and in dealing with the effects of discrimination or being marginalized (Llamas & Consoli, 2014). Thus, locus of control is shaped by and shapes individuals' interactions with the culture around them.

Culture

Let's consider collectivist versus individualist cultural differences. People from Eastern cultures have been found to be more externally oriented than people from Western cultures. Whereas Western cultures traditionally prize self-reliance and individualism, Eastern culture emphasizes collectivism, community reliance, and interdependence. Indeed, a large-scale comparison of 18 cultures confirmed that people in collectivist cultures scored higher in external locus of control than those in Westernized countries who placed a greater value on having an internal locus of control (Cheng et al., 2013). A study of over 2,600 adults 18–70 years old from Asia (China, India, and Indonesia) and Europe (Bulgaria, Germany, and Hungary) examined health locus of control in response to the COVID-19 pandemic (Krumov et al., 2022). Results suggested that people from Asia, where cultures tend to be collectivist, reported higher external locus of control (specifically, relying on powerful others); on the other hand, people from Europe and individualist cultures reported more internal locus of control. Such cultural differences have implications for diverse approaches to making important life decisions. For example, a study of career decision making in nearly 950 American and Chinese undergraduate students found that Chinese students had more internal, versus external, locus of control compared to American students (Guan et al., 2015). Further, Chinese students, more than American students, tended to consult with others, desire to please others, compromise, and depend on others when it came to making a decision about their careers.

Differences in locus of control based on culture extend beyond the West and East. A study of college students in South Africa (an individualist culture) and in Lebanon (a collectivist culture) found that the South African students scored significantly higher in internal locus of control than the Lebanese students (Nasser & Abouchedid, 2006).

Culture may also interact with gender to shape whether people have internal or external locus of control. A study of 14- and 15-year-olds in Norway found that girls scored significantly higher than boys did on internal locus of control (Manger & Ekeland, 2000), but the opposite was found in a study of young adults (18–29 years old) in England (Holland et al., 2010). In China, men have been found to score higher than women in internal versus external control (Tong & Wang, 2006).

Pause for Reflection

Can you think of other sources of diversity that interact with locus of control to predict outcomes?

Reflections on Locus of Control

Is locus of control a unique construct or related to what we have discussed in other chapters? A large-scale research project with both college students and employees who work in sales reported a strong relationship between Rotter's concept of locus of control and Bandura's concept of self-efficacy (Judge et al., 2002). Both ideas deal with our perception or belief about the degree of control we have over events in our life and our ability to cope with them. A major difference between the two concepts is that locus of control can be generalized over many situations, whereas self-efficacy tends to be conceptualized and operationalized (i.e., measured) specific to a particular context. However, Bandura insisted there was little overlap between the concepts of self-efficacy and locus of control. He wrote,

> Beliefs about whether one can produce certain actions (perceived self-efficacy) cannot, by any stretch of the imagination, be considered the same as beliefs about whether actions affect outcomes (locus of control). (1997, p. 20)

It may be that they are empirically related because people who tend to have high self-efficacy also tend to have high internal locus of control. Whatever the case, Rotter's research and that of others on locus of control has been highly rigorous and well controlled and provided considerable empirical support for the

importance of locus of control in personality and predicting outcomes. Rotter noted that locus of control has become "one of the most studied variables in psychology" (1990, p. 489). Well into the 21st century, locus of control continues to be the subject of research.

Pause for Reflection

Do you think that locus of control is similar to other personality traits we have discussed?

Marvin Zuckerman: Sensation Seeking

Beginning in the 1970s, psychologist Marvin Zuckerman (1928–2018) conducted research on a limited-domain aspect of personality he called **sensation seeking**, at the University of Delaware. This trait has a large hereditary component initially noted by Eysenck. Zuckerman describes sensation seeking as a desire for "varied, novel, complex, and intense sensations and experience, and the willingness to take physical, social, legal, and financial risks for the sake of such experience" (Zuckerman, 1994a, p. 27). We might call it simply "taking chances."

Assessing Sensation Seeking

To measure sensation seeking, Zuckerman constructed the Sensation Seeking Scale (SSS), a 40-item questionnaire. When developing this measure, he administered it to many people whose behavior corresponded to his definition of sensation seeking. These included people who volunteered for psychological experiments that exposed them to novel experiences, people whose jobs involved physical danger (e.g., police officers and race-car drivers), and people who reported experimenting with drugs or varied sexual experiences.

Their sensation seeking scores were compared with the scores of people who deliberately avoided novel or risky activities. Those who deliberately sought unusual activities scored high on the SSS, and those who preferred less venturesome activities scored low. Sample items from the Sensation Seeking Scale are presented in Table 14.2. Over the years, the test has been revised and is now in its fifth version. There are also brief versions, versions developed for use with children, and many translations of the scale. The Brief Sensation Seeking Scale, for example, is eight items and has been translated for use in America, Canada, Italy, China, Peru, Portugal, and Spain (e.g., Chen et al., 2013; Fan et al., 2014; Martín-Fernández et al., 2021).

Other scales for assessing sensation seeking have been developed as well. For example, German psychologists published the Need Inventory of Sensation Seeking in both German and English languages (Roth & Hammelstein, 2012). The Need Inventory of Sensation Seeking might be an even more reliable and valid test for measuring sensation seeking than the original scale (Marker & Schneider, 2015).

Components of Sensation Seeking

Using the method of factor analysis, Zuckerman (1983; Zuckerman & Aluja, 2015) identified four components of sensation seeking.

- Thrill and adventure seeking: A desire to engage in physical activities involving speed, danger, novelty, and defiance of gravity such as parachuting, scuba diving, or bungee jumping.
- Experience seeking: The search for novel experiences through travel, music, art, or a lifestyle that does not conform to the mainstream culture's norms, with similarly inclined people.
- Disinhibition: The need to seek release in uninhibited social activities such as risky sex, impulsiveness, aggressiveness, and antisocial behaviors.
- Boredom susceptibility: An aversion to repetitive experiences, routine work, and predictable people, and a reaction of restless discontent when exposed to such situations.

Good and Bad Sensation Seeking

Zuckerman later noted a distinction between so-called good and bad sensation seeking:

- The good, productive, healthy, adaptive type, or *non-impulsive socialized sensation seeking*, involves the thrill- and adventure-seeking component.
- The bad, unproductive, unhealthy, maladaptive type, or *impulsive unsocialized sensation seeking*, consists of high scores on the disinhibition, experience seeking, and boredom susceptibility components, as well as high scores on Eysenck's psychoticism scale (Roberti, 2004; Zuckerman, 1994b).

Research supports these distinctions. In a study with samples of people who have committed criminal offences and from the general population, researchers find that offenders tend to be higher in impulsive

sensation seeking The need for varied, novel, and complex sensations and experiences.

Table 14.2 Sample items from the Sensation Seeking Scale, Form V

Choose the statement in each pair that you prefer.
a. I like wild uninhibited parties.
b. I prefer quiet parties with good conversation.
a. I get bored seeing the same old faces.
b. I like the comfortable familiarity of everyday friends.
a. A sensible person avoids activities that are dangerous.
b. I sometimes like to do things that are a little frightening.
a. I would like to take off on a trip with no preplanned or definite routes or timetables.
b. When I go on a trip I like to plan my route and timetable fairly carefully.
a. I would like to try parachute jumping.
b. I would never want to try jumping out of a plane with or without a parachute.
a. There is altogether too much portrayal of sex in movies.
b. I enjoy watching many of the sexy scenes in movies.
a. I am not interested in experience for its own sake.
b. I like new, exciting experiences and sensations even if they are a bit frightening, unconventional, or illegal.
a. People should dress according to some standard of taste, neatness, and style.
b. People should dress in individual ways, even if the effects are sometimes strange.

Source: Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking* (pp. 389–392). Cambridge University Press.

unsocialized sensation relative to nonoffender members of the general population (Herrero & Colom, 2008). Specifically, the incarcerated individuals were higher on experience seeking, disinhibition, and boredom susceptibility as well as psychoticism.

Building on these distinctions, research has identified three types of risk takers: antisocial risk takers, adventurous risk takers, and prosocial risk takers. Notably, though, the SSS seems to capture more antisocial and adventurous sensation seeking, rather than prosocial risk-taking. The motives of the prosocial group are related to factors other than thrill and adventure seeking (Levenson, 1990). More recent research finds that "fearless" personality traits were associated with prosocial (recreational and social) risk taking, whereas "impulsive" personality traits were associated with antisocial and health risk taking (Satchell et al., 2018).

Development of Sensation Seeking

Children's development of sensation seeking is shaped in part by their caretakers' behavior. Parents' monitoring has been linked to less risk-taking behavior in older adolescents (16–19-year-olds) in South Africa (de Jager & Naudé, 2018). In general and across cultures, younger people are more inclined to seek adventure, risk, and novel experiences than older people. A meta-analysis on children's and adolescents' risk-taking behavior found that adolescents take more risks than children in the real world, but similar levels of risk in the laboratory (Defoe et al., 2015). The implication is that children naturally take more risks as they grow older, but if they receive systematic reinforcement, such as in lab experiments, children across ages engage in risky behavior to a similar extent. Sensation seeking increases across adolescence before leveling off in young adulthood, decreasing in later adulthood, and then remaining steady into older age (Littlefield et al., 2016; Lynne-Landsman et al., 2011; Njau & Othuon, 2022).

Zuckerman's Sensation-Seeking Experiences

The research results on the effects of age on sensation seeking were confirmed by Zuckerman's own life experiences. He said that when he was a college student he "reached [his] full sensation-seeking potential through

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Zuckerman proposed that sensation seeking can be productive and healthy, such as helping others, or unproductive and unhealthy, such as speeding.

drinking, sex, and hitch-hiking around the country." At age 74, he wrote,

> When I was a young sensation seeker I imagined that after I retired I would do all kinds of adventurous things like hang gliding, parachute jumping, and learning to fly an airplane. But whereas thrill and adventure seeking and disinhibition fall rapidly with age, experience seeking does not change. (Zuckerman, 2004, pp. 13, 21)

Zuckerman reported that he continued to seek new experiences, but they are less physically adventurous or risky than when he was younger.

Pause for Reflection

What other personality traits might affect whether someone's sensation seeking tendencies are adaptive or maladaptive?

Correlates of Sensation Seeking

Physical Risk Taking

Physical risk-taking behavior is related to sensation seeking. Skydivers, firefighters, riot-control police officers, bungee jumpers, and race-car drivers score higher in sensation seeking than groups that do not engage in these activities. A study of American Motocross drivers found that the most experienced (those who participated in the most races) had the highest scores on a measure of sensation seeking (Smith et al., 2014). In a study of pilots with training in the U.S. military, researchers found that that the pilots scored high in experience seeking but lower in neuroticism (Glicksohn & Naor-Ziv, 2016).

Research with college undergraduates found that high sensation seekers were more likely than low sensation seekers to participate in risky sports and to volunteer for military combat units in Israel (Hobfoll et al., 1989) and to injure themselves in an extreme sport (i.e., mountain biking and snowboarding) in the United States (Gardner et al., 2021). Similarly, research in Germany found that people who scored high in self-reported risk taking and on a risk-taking task were more likely to compete in extreme sports (i.e., climbing and snowboarding; Keller et al., 2021).

Antisocial, Addictive, and Unhealthy Risk Taking

People higher in sensation seeking are more likely to engage in risky behaviors that might be pleasurable or lead to some benefit to the self, even when these behaviors can cause personal health or social damage. Chinese boys in adolescence with higher sensation seeking were higher in video gaming addiction and impulsivity relative to those lower in sensation seeking (Hu et al., 2017). High school and college students in China who scored high in sensation seeking were more likely to become obsessed with computer games and internet use (Qing-Xin et al., 2005; Zheng et al., 2006).

High sensation seekers are more likely than low sensation seekers to use and sell illicit drugs (and to do so at an earlier age), to drink a lot of alcohol, to shoplift, and to commit crimes. Such results emerge in diverse adolescents in the United States, teens in Norway, and university students in South Africa (Bacon et al., 2014; Hampson et al., 2013; Hansen & Breivik, 2001; Mahoney et al. 2015; Peltzer et al., 2001; Stanton et al., 2001). Studies of American high school and college students found that high sensation seekers were more likely to smoke, use alcohol and drugs, drive fast, have more car accidents and convictions

for reckless or drunk driving, and engage in frequent casual sex (McAdams & Donnellan, 2009; Ortin et al., 2012; Ravert et al., 2009). These results have been replicated. Across time and with both Black and White participants, researchers have found that those who scored high on a measure of sexual sensation seeking reported greater sexual risk-taking behaviors—such as more instances of intercourse with more partners and less use of condoms—than those who scored low (Spitalnick et al., 2007; Zuckerman, 1994b).

Among high school and college students in the United States and in Canada, those who scored high in sensation seeking were more likely to engage in reckless and risky behaviors and uncontrolled gambling than those who scored low (Collado et al. 2014; George et al., 2006; Gupta et al., 2006). Research in Spain and in France confirmed the link between high sensation seeking and speeding and drunk driving (Delhomme et al., 2012; Gonzales-Iglesias et al., 2014). Online poker players in France tended to score higher in sensation seeking and to experience strong feelings of arousal while doing so than those who did not play poker online (Barrault & Varesconi, 2013).

Extremist behavior has also been tied to sensation seeking. Across seven studies, researchers found that sensation seekers supported violent activist groups and experienced more meaning in life from and willingness to self-sacrifice to support political violence. The sensation seekers supported extremism because they found the groups' activities to be exciting (Schumpe et al., 2020).

Prosocial Risk Taking

Although it is clear that certain types of sensation seeking are associated with antisocial behavior, some research also suggests that prosocial sensation seeking exists and predicts prosocial behavior as well. Across three experiments with university students in China, researchers found that many types of moral scenarios require risk taking, and people who are willing to take the risks end up being more altruistic (Liu et al., 2023). They found that people would take more prosocial risks to help strangers if the situation was more urgent, the personal cost was lower, success was more likely, and if peers were present. In research with first responders (military members, firefighters, EMTs, and police officers), sensation seeking, as well as fearless dominance, was positively related to everyday heroism and altruism (Patton et al., 2018). That is, the higher first responders were in sensation seeking, the more they engaged in behaviors to help and protect and save others in their jobs.

Pause for Reflection

What is the role of risk taking in your life when it comes to your prosocial goals?

Cognitive Processes

Some research suggests that sensation seeking is associated with cognitive ability and tendencies. Correlations between sensation seeking and intelligence test scores are generally positive but not high. A study of children in the Republic of Mauritius, an island nation in the Indian Ocean off the coast of Africa, found that those who scored high in sensation seeking at age 3 scored 12 points higher on intelligence tests at age 11 than children who scored low in sensation seeking at age 3. The results were similar for boys and girls and were not affected by the parents' occupation or level of education (Raine et al., 2002). But it is unclear whether these results would generalize to other populations.

Novel sensation seeking is associated with more creative and divergent thinking. In a divergent thinking task, undergraduate students were tasked with thinking of as many uses for a cable and tin can as possible, with two minutes for each item (Gocłowska et al., 2019). People higher in novelty seeking were higher in creative thinking, namely, more fluency, flexibility, infrequency, and subjective originality in the uses of the items they came up with.

The cognitive processes that are essential for safe driving vary by sensation seeking. For example, in a study in Italy, researchers observed the driving of people on a Honda Riding Trainer (HRT) simulator. People who scored high in thrill and adventure seeking performed worse to the extent that they made risky decisions on another task (Gianfranchi et al., 2017). Similarly, sensation seeking in young drivers was associated with higher speed in a driving simulator (Riendeau et al., 2018).

Occupational Preferences

Because high sensation seekers have a greater need for stimulating and varied experiences, they tend to choose different jobs than low sensation seekers. On tests of vocational interests, people higher in sensation seeking tended to be more interested in scientific and less interested in clerical activities and jobs. High sensation seekers who were interested in the helping professions (e.g., psychologist, physician, psychiatrist, social worker, and minister) expressed a preference for risky, cutting-edge jobs such as crisis intervention work or paramedic duty on emergency response teams.

As discussed previously, people high in sensation seeking are more likely to go into physically risky occupations, such as police, EMT, firefighters, extreme athletics, and the military. Indeed, young adults in India were more likely to aspire to be an officer in the Armed Forces if they were higher in risk taking (Kowal et al., 2016).

People who work in different occupations have different risk-taking tendencies. In a study with U.K. adults, people who dealt with health and safety risks at their work were risk averse, whereas people who worked jobs with more financial and social risks engaged in more risky behavior when a task was framed as providing gains, but this pattern reversed when risky behavior was tied to losses (Hill et al., 2019).

Job and Academic Performance

For people who have physically risky jobs, as discussed previously, sensation seeking may be adaptive. However, for other types of occupations, sensation seeking may be maladaptive. For example, a study of nonmanager employees in the United States found that people high, versus low, in sensation seeking scored lower on job performance. People high on sensation seeking were also less likely to establish social relationships or try to obtain information from coworkers or supervisors at work. The researchers suggested that such lower-level jobs might not be sufficiently stimulating for high sensation seekers (Reio & Sanders-Reio, 2006). Similarly, workers in the United States high in sensation seeking more frequently used their workplace computers for personal reasons such as sending emails, playing computer games, and viewing websites with sexual content, all of which can undermine work productivity (Everton et al., 2005). In contrast, high school students in Spain with lower sensation seeking performed better academically than those higher in sensation seeking, both in terms of specific grades and GPA (Cladellas et al., 2017).

Attitudes

Sensation seeking has also been associated with attitudes. For example, people higher, versus lower, in sensation seeking tend to be more liberal in their political and religious attitudes (Zuckerman, 1994a). Additionally, higher sensation seeking has been associated with lower religiosity and church attendance. This has been conceptually replicated more recently, with those higher in sensation seeking being lower in intrinsic religiosity and religious service attendance in the United States (Galbraith & Conner, 2015).

Sensation seeking may help us understand the link between tolerance of ambiguity and political ideology; conservatives are less tolerant of ambiguity than liberals (Farmer et al., 2021).

High scores on sensation seeking are also associated with more permissive attitudes toward sexual behavior, whether their own or that of other people (Zuckerman, 1994a). More recent work corroborates this finding: Men in China who are higher in sensation seeking tend to have less knowledge of and more negative attitudes about condom use (Gao et al., 2017).

Other Personality Traits

Sensation seeking is one of many personality traits, and it tends to cluster systematically with some of those other personality traits, forming fuller personality profiles. As Zuckerman proposed and found, other researchers have found that people higher in sensation seeking also tend to be higher in extraversion, openness to experience, and the Dark Triad. Early work suggested that high sensation-seeking scores correlated positively with extraversion as described by Carl Jung and measured by the Myers-Briggs Type Indicator

Highlights

Research on Zuckerman's Ideas

High sensation seeking is associated with:

- A developmental pattern of increasing in childhood and peaking in adolescence, with a plateau in young adulthood, decreasing across adulthood, and remaining steady in older age
- Physical risk taking, such as in extreme sports like rock climbing and snowboarding
- Antisocial, addictive, and unhealthy risk taking
- Prosocial risk taking when people need urgent help or in the context of first responder work (e.g., firefighter, EMT)
- More creative but less careful cognitive processes
- Preference for exciting jobs
- Poorer job performance (outside the context of risky work)
- More liberal versus conservative attitudes
- Higher tolerance of ambiguity
- Higher extraversion, openness, and lower conscientiousness and neuroticism; results with agreeableness are mixed

(Morehouse et al., 1990). Sensation seeking was also positively correlated with the openness to experience and the agreeableness dimensions of the five-factor model of personality (Roberti, 2004).

Research with college students and adults in the Netherlands found that high sensation seekers also scored high on the personality factors of openness to experience and extraversion and lower on conscientiousness, agreeableness, and neuroticism; sensation seeking was also negatively related the HEXACO model factor of honesty–humility (de Vries et al., 2009).

In a study of competitive rock climbers in the United Kingdom, researchers found that different types of sensation seeking were associated with different combinations of the Big Five personality traits (Rumbold et al., 2021). Climbers who scored higher in thrill and adventure seeking and in experience seeking also scored higher in openness to experience and lower in neuroticism. Those higher in disinhibition (i.e., seeking out particularly frightening experiences) and boredom susceptibility tend to also be high in extraversion and agreeableness and low in conscientiousness.

People in Portugal who were high in sensation seeking also tended to be high in the Dark Triad traits: narcissism, Machiavellianism, and psychopathy (Pechorro et al., 2021). Likewise, in research with nearly 13,000 people from 18 cultures in Europe, America, Africa, and Asia, individuals higher in sensation seeking were also higher in the Dark Triad traits (Aluja et al., 2022). Other work demonstrates that sensation seeking is also associated with psychopathic traits, impulsivity, and aggressive personality, as evidenced in a study with people from the Netherlands (van Dongen et al., 2022).

Diversity and Sensation Seeking

Gender

A large body of research finds that men tend to be higher in sensation seeking than women. For example, research in Iran finds that men consistently scored higher in sensation seeking and lower in impulse control than women (Khodarahimi, 2014). Significant gender differences were also found in the four individual components of sensation seeking. Men scored higher on thrill and adventure seeking, disinhibition, and boredom susceptibility. Women scored higher on experience seeking. Similar results were obtained from people in the United States, England, Scotland, Japan, and Thailand. These results were replicated in a longitudinal study with over 8,200 diverse Americans (i.e., men and women who identified as Black, Hispanic, and White) that also found that the development trajectory of boys and girls differed (Shulman et al., 2015). Specifically, girls reached their top level of sensation-seeking earlier than boys and more quickly decreased in sensation seeking after peaking. Notably, although women may report higher levels of neuroticism and impulsivity, which are related to sensation seeking, men exhibit more impulsive behavior and brain activity that reflects impulsivity as evidenced by a study in Croatia (Knežević, 2018). This may reflect different socialization of people of different genders.

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Men tend to be more sensation seeking than women, participating in higher numbers in extreme sports such as skydiving.

Ethnicity, Race, and Culture

Black and White American 9–12-year-olds were similar in risk taking at the beginning of a task, but over time, Black adolescents evinced more risk taking than did White adolescents (Collado et al., 2017). In another, longitudinal study of Black and White American children from 8 years old into teen years, researchers found that White children had higher levels of initial sensation seeking, whereas the opposite was true of impulsivity (Pedersen et al., 2012). Regardless of race, children increased similarly in impulsivity, whereas White children increased more in sensation seeking over time. For White people, but not Black people, bigger increases in sensation seeking predicted more alcohol use later.

A culture's development and wealth can shape an important outcome of sensation seeking—risk taking. Analyzing data from the World Values Survey data from 58 countries with 87,223 participants, researchers found that people in more developed countries were less inclined to take risks and that individuals who had fewer economic resources were more inclined to take risks (Canale et al, 2018); interestingly, the link between personal low resources and risk taking was higher in countries with more wealth (higher gross domestic product [GDP] per capita).

A study examining risk taking in a cross-national sample of over 5,200 individuals aged 10 through 30 from 11 countries found that Eastern and Western cultures differed in how self-regulation relates to risk taking: Self-regulation was associated with risk taking in Western but not Eastern cultures, such that the more self-control people have, the less they take risk in the West (Duell et al., 2016).

Research comparing 14- to 20-year-olds in Turkey and in Wales on their motivation to undertake risky behaviors found small but significant differences between the two cultures (Kloep et al., 2009).

Nonetheless, the trajectory of sensation seeking across the life span is similar across cultures, as suggested by a study of over 5,400 people from age 10 to 30 from 11 countries in Africa, Asia, Europe, and the Americas (Steinberg et al., 2018): sensation seeking increases in adolescence, peaked at age 19, and declined from then on.

Pause for Reflection

Are there other sources of diversity that interact with sensation seeking to predict outcomes?

Heredity Versus Environment

A large amount of research consistently finds a strong hereditary (genetic) basis for the sensation-seeking personality factor (Zuckerman, 2013). A study by Eysenck suggested that 58% of this trait could be accounted for by genetic factors (Eysenck, 1983). A twin study conducted by Zuckerman and colleagues, including Sybil Eysenck, found an even greater genetic component (Fulker, Eysenck, & Zuckerman, 1980). In a twin study of American adolescents (ages 13 to 20), researchers found a genetic influence on sensation seeking and related delinquent behavior as well as a Person × Environment interaction: Individuals higher in sensation seeking were more influenced by peers to engage in antisocial and risky behaviors (Mann et al., 2016). Similarly, in a study of over 2,500 sibling pairs, researchers found that genetics accounted for over 80% of individual differences in sensation seeking initially and in change over time (Harden et al., 2012). This research also found a genetic link between sensation seeking and delinquency.

But like with almost all traits, the environment can provide a buffer, for example by providing warm but attentive and firm parenting (e.g., de Jager & Naudé, 2018; Loman et al., 2014) and education and wealth (e.g., Eklund & Fritzell, 2014).

Pause for Reflection

Do you think sensation seeking comes before other personality traits or after them?

Reflections on Sensation Seeking

Zuckerman's introduction of the sensation-seeking personality trait led to myriad research. Sensation seeking has been related to a wide range of behavioral, cognitive, personality, and physiological variables. His emphasis on the heritability of sensation seeking places his work in a different category from the behavioral and social-learning approaches to personality, which focus on the influences of situational factors and of learning.

Sensation-seeking theory has a commonsense appeal. It is easy to accept the idea that people differ in their need for excitement and risk, change, and adventure. We are usually aware of our own level of sensation seeking and make fairly accurate judgments about the levels of our friends and relatives by considering the activities they enjoy or avoid. Zuckerman asked high and low sensation seekers to choose from a list of adjectives the ones that best described them. The results are presented in Table 14.3. Which ones would you choose?

Table 14.3 Self-descriptions of high and low sensation seekers

High Sensation Seekers	Low Sensation Seekers
Enthusiastic	Frightened
Playful	Panicky
Adventurous	Tense
Elated	Nervous
Imaginative	Shaky
Daring	Fearful
Zany	Worried
Mischievous	Upset

Source: From Zuckerman, M. (1978). Sensation seeking. In H. London and J. E. Exner, Jr. (Eds.), *Dimensions of Personality*. Wiley.

Martin E. P. Seligman: Learned Helplessness, Optimism–Pessimism and Happiness

Learned Helplessness

The psychologist Martin Elias Peter Seligman (1942–) would go on to be a leader in the happiness and positive psychology trend in psychology.

Seligman was born in Albany, New York. When Seligman was 13, his father had a severe stroke that rendered him physically disabled and unable to independently care for himself and continue his prior daily functions. The episode left young Seligman with his emotions completely "frozen over," as he put it. He later said that the ordeal was a "real important shadow" over his life (quoted in Burling, 2010, p. 7).

Seligman attended a private prep school in Albany, New York; most of the students came from wealthy upper-class families, and Seligman felt like an outsider. He was keenly aware of the differences between him and the other boys, and as a result felt isolated and alone. A close friend said that Seligman never lost that feeling. The friend said, "I think he still might inwardly struggle with being accepted" (quoted in Burling, 2010, p. 6). But Seligman was intelligent and hardworking, and had the opportunity to apply to and be accepted at Princeton for his bachelor's, which was in philosophy. He went on to earn his PhD at the University of Pennsylvania in 1967. His career featured building the foundations for the scientific study of learned helplessness, optimism and pessimism, and happiness. His career trajectory brought him to his position as director of the university's Positive Psychology Center. He is also known to be a champion bridge player.

In the mid-1960s, at the University of Pennsylvania, he began research on a limited-domain facet of personality called learned helplessness. He first saw this phenomenon in an experiment with dogs on his first day as a graduate student. It marked the beginning of the direction of his future in psychology, and the future of psychology itself.

The dogs were being conditioned to associate a high-pitched sound with an electric shock. This was a simple Pavlovian classical conditioning situation involving respondent behavior (the pairing of the tone with the shock). But that was only the first part of the study.

In the second part, the dogs were placed one at a time in a large box that contained two compartments divided by a low wall. A shock was delivered through the floor of the compartment in which the dog had been placed. To escape the shock, the dog had to exhibit the appropriate operant behavior, that is, to simply jump over the low barrier into the other compartment where there was no electric shock. Once the dogs learned to jump over the wall—something dogs can be expected to do quickly—they would be tested to see if the high-pitched tone without the electric shock would bring about the same response.

A Shocking Finding

The research did not work out the way it was supposed to. The dogs did not jump over the barrier to escape the shock. Instead, when the shock was administered through the floor of their compartment, they would lie down, whimper, and make no effort to escape (Overmier & Seligman, 1967; Seligman & Maier, 1967).

The experimenters were baffled, but Seligman thought he had a clue. He suggested that perhaps during the first part of the experiment, the dogs had learned that they were helpless to change their situation. When the tone sounded, there was nothing they could do to avoid the paired shock. Why even try? This learned reaction apparently generalized to the second part of the experiment, even though a means of escape was available. Seligman wrote,

> I was stunned by the implications. If dogs could learn something as complex as the futility of their actions, here was an analogy to human helplessness, one that could be studied in the laboratory. Helplessness was all around us—from the urban poor to the newborn child to the despondent patient with his face to the wall. Was this a laboratory model of human helplessness, one that could be used to understand how it comes about, how to cure it, how to prevent it, what drugs worked on it, and who was particularly vulnerable to it? (1990, p. 20)

Determined to find the answers, Seligman launched a research program to study **learned helplessness**, a psychological pattern, in which an individual's personal agency is reduced as a result of the perception that they have no control over their environment, that there is nothing they can do to change their situation. Agency is a person's being active, usually toward a goal, or being able to produce a desired effect on or change

learned helplessness A psychological pattern of lacking personal agency that results from the perception that one has no control over their environment.

in the environment. Seligman expanded his research interests to include the issue of optimism versus pessimism and, later, the issue of happiness—each of which we will discuss later in this chapter.

Research has examined how learned helplessness develops in other contexts in both other animals and, crucially, humans.

Learned Helplessness in Animals and Health Implications

Martin E. P. Seligman and his colleagues carried out much of this research and were interested in the effects on subsequent health. For example, in one study, rats were injected with malignant tumor cells and exposed to one of three conditions: an electric shock from which they could escape, a shock from which they could not escape, and no shock (Visintainer et al., 1982). Under normal circumstances, based on the number of cells injected, half the rats would be expected to reject the cells and survive. In the control group (no electric shock), 50 percent rejected the tumor as expected. Among the rats that received a shock but could escape—thus having some control over their situation—70 percent rejected the tumor and survived. But in the learned helplessness group—the group that could not escape the shock—only 27 percent of the rats rejected the malignant cells and survived. These results were supported in a similar study of rats who were exposed to those conditions as young rats and to the tumor cells as adults. The majority of the rats who had learned to be helpless when young failed as adults to reject the tumors. In contrast, the majority of the rats who had learned control when young rejected the tumors as adults (Seligman & Visintainer, 1985). Seligman concluded: "Childhood experiences proved to be crucial in tumor rejection by adults. Childhood mastery immunized, and early helplessness put adult rats at risk for cancer" (1990, p. 170).

How does learned helplessness undermine health? Learned helplessness was found to weaken the immune systems of rats (Maier et al., 1985). The immune system forms a major part of the body's defense against illness. It contains several kinds of cells, including T-cells and NK (natural killer) cells, which aim to destroy viruses, bacteria, and tumor cells. In rats subjected to inescapable shock, T-cells no longer multiplied rapidly in response to specific invaders, and NK cells lost their ability to destroy other infections. These findings may provide a physiological explanation for the result that the helpless rats were unable to reject their tumors. Further research found that most male rats exposed to uncontrollable stress never learned how to escape, whereas most female rats did learn to escape (Dalla et al., 2008). This suggests that female sex may be a buffer against the physiological changes that make an individual susceptible to learned helplessness.

Other research has found that learned helplessness can be developed in mice (Landgraf et al., 2015), honeybees (Dinges et al., 2017), and zebrafish (do Nascimento et al., 2016).

Learned Helplessness in Humans

Researchers have also established that learned helplessness can develop in humans and function as an individually differing trait. In early research, people in an experimental group were exposed to a loud, irritating noise and told they could turn it off if they pressed a series of buttons in the correct sequence. However, there was really no correct sequence, such that no matter what action the people took, the noise continued. In the control group, people could turn off the noise by pressing the buttons in a relatively easy sequence. In the next step, the participants were put in a new situation in which they could stop the noise simply by moving their hand from one side of a box to the other in response to a light signal. On average, people in the control group quickly learned this behavior, but people in experimental group subjects did not. Instead, the people who were not able to stop the noise before now sat passively, making no effort to learn the new noise-stopping action (Hiroto, 1974).

Learned helplessness can also be developed through social (observational) learning, especially when the subjects recognized similarities between themselves and the models (Chamber & Hammonds, 2014). These studies suggested that the participants were saying, in effect, "If the models can't do anything about this, then neither can I."

A meta-analysis of 132 studies involving several thousand people of varying ages found that the effects of inescapable shock were even stronger in humans than in other animals (Villanova & Peterson, 1991). Much research since then has confirmed that learned helplessness can emerge and function as a trait as a result of many different situations that feel out of our control, including, for example, noise from a neighbor or outdoors (Evans & Stecker, 2004; Rabinowitz, 2005), being cyberbullied (Zucchi et al., 2012), or unemployment (Li et al., 2012).

Learned helplessness undermines individuals' ability to put into action their attitudes. For example, people who have concerns about the environment but are high in learned helplessness are less likely to engage in pro-environmental behaviors, as evidenced by a study in Canada (Landry et al., 2018). When it comes to other personality traits, learned helplessness is negatively correlated with conscientiousness, extraversion, openness to experience, and agreeableness, and positively correlated with neuroticism (Sorrenti et al., 2018).

Pause for Reflection

Think back across your life. Were there times when you learned to be helpless? What was the context? Did you eventually learn to master the task at hand?

Development of Learned Helplessness in Childhood

Although learned helplessness can occur throughout life, Seligman suggested that we are particularly vulnerable to developing those feelings in infancy and early childhood. During these formative years the experience of learned helplessness can predispose us to the pessimistic explanatory style (Seligman, 1975).

Infants begin life in a state of total helplessness, with no control over their environment. As they mature, they become increasingly able to exercise control. They can cry, which brings parents or caregivers to tend to their needs. They can crawl, walk, and speak, and the mastery of each skill brings greater possibilities for control and also for failure. Through these early interactions with the physical and social environments, a child's sense of helplessness, or of mastery and control, will be determined.

When infants engage in a behavior in response to some situation, it may lead to some change in their environment, such as food, a comfortable place to sleep, a clean diaper, a toy, or a hug, or it may have no effect. At a primitive level, infants form associations between behaviors and outcomes. If the behaviors do not lead to successful outcomes again and again, the result will likely be learned helplessness. Infants learn that particular behaviors don't work, and they may generalize this idea to other behaviors, believing that none of them will work. This goes for older children as well.

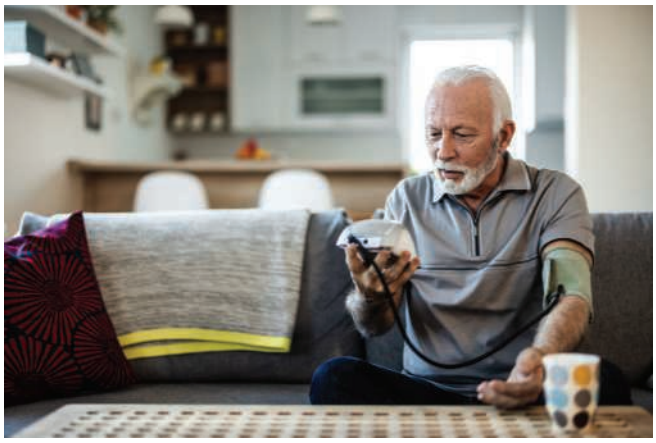
In a study of American kindergartners, negative life events and parenting predicted more learned helplessness, whereas positive parenting predicted less learned helplessness on a puzzle task (Cole et al., 2007). For even older children, though, having an overcontrolling caretaker or educator can be detrimental as well. For example, high school students in Italy who had a mother or teacher who tries to psychologically control them, who does not allow the child to develop their own abilities and capacity to cope, is associated with the individual's inability to deal with frustrations and, in turn, with more learned helplessness, especially at school (Filippello et al., 2018, 2020). This is problematic, as learned helplessness is associated with poorer academic achievement (Buzzai et al., 2021). The good news is that teachers can serve as positive reinforcers for agentic behavior: The negative emotions that come with test anxiety and learned hopelessness were attenuated when teachers provided rewarding support, as evidenced in a study of adolescents in Germany (Raufelder et al., 2018).

Correlates of Learned Helplessness

As with animals, the extent to which people have learned to be helpless can impact their health, both psychological and physical.

Mental Health

The beneficial effects on psychological health of having control over one's life, and the detrimental effects of learned helplessness, have been widely documented across diverse age ranges and people. Early research found that among cancer patients (ages 29–80) in the United States, those with the highest perception of



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Learned helplessness undermines health, both psychological and physical.

control over their feelings, illness, and recovery had better mental health than those who learned helplessness, even for patients who were severely debilitated by their physical condition (Thompson et al., 1993).

Research with Italian children with specific learning disorders, who often face frustrating challenges in their education, demonstrated that those who developed learned helplessness in school were more likely to experience internalizing symptoms, namely, anxiety and depression (Sorrenti et al., 2021). University students in Jordan who were higher in learned helplessness were also higher in anxiety and frequency of thoughts about suicide (Al-Masry, 2022). Similarly, during the COVID-19 pandemic lockdowns in Pakistan, adults who felt more lonely developed higher levels of learned helplessness, which were in turn associated with higher levels of depression (Khan et al., 2020).

Women with and without employment in India reported their levels of learned helplessness and coping, and those who were higher in learned helplessness were not able to cope well (Li et al., 2012). This helps us understand the link between learned helplessness and mental health. Feelings of helplessness undermine one's motivation and ability to cope with stressors, leading to more mental health challenges.

Physical Health

Learned helplessness undermines the physical health of humans. For example, in patients with arthritis (i.e., inflammatory polyarthritis), people with higher learned helplessness (largely those with lower socioeconomic resources; economic resources are often essential for procuring good treatment) had significantly worse arthritis outcomes across their joints, compared to people who had lower learned helplessness in a study in the United Kingdom (Camacho et al., 2012).

As the studies with animals suggest, it is likely that learned helplessness undermines people's immune systems and physical health strengthening mechanisms. As a Romanian psychologist argues, both the passivity and the neurophysiological changes that come with learned helplessness should be taken into account when trying to understand the helplessness–health link (Marian, 2013). A study of patients receiving hemodialysis (i.e., treatment by which a machine purifies the blood of patients whose kidneys are not working well to do so) in China found that patients whose learned helplessness grew over the course of treatment engaged in less condition management and self-care, which is essential for optimizing health during this challenging time (Xie et al., 2023).

optimistic explanatory style Characterized by the expectation that good things will happen and can buffer against learned helplessness.

pessimistic explanatory style Characterized by the expectation that bad things will happen and can spread learned helplessness to all facets of life.

Pause for Reflection

What are three ways by which learned helplessness undermines mental and physical health?

Explanatory Style: Optimism and Pessimism

Martin E. P. Seligman expanded his work on learned helplessness to encompass the factor of optimism versus pessimism. It is not only the lack of control under conditions of learned helplessness that affects our health but how we explain this lack of control to ourselves. He proposed the concept of explanatory style to account for this factor. An **optimistic explanatory style** prevents helplessness; a **pessimistic explanatory style** spreads helplessness to all facets of life.

You may know from your own experience the basic difference between optimists and pessimists. Put simply, "optimists are people who expect good things to happen to them; pessimists are people who expect bad things to happen to them" (Carver & Scheier, 2002, p. 231). Tending toward optimism or pessimism may determine many aspects of our life. For example, it has been found that optimists build better social networks and connections and are also better able to cope with physical pain (Carver & Scheier, 2014; Ramirez-Maestre et al., 2012).

Development of Optimism and Pessimism

Children's development of optimism versus pessimism is shaped by their parents' explanatory styles and solidified by about age 8. Seligman wrote: "pessimistic parents also have pessimistic children" (Peterson et al., 1993, p. 293). Studies in India found that the childhood level of pessimism or optimism can be strongly influenced by the parents' level of education as well. The greater the parents' formal education, the greater the

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Pessimism is believing bad things will happen to you, and optimism is believing good things will happen to you.

optimism of their children (Daraei & Ghaderi, 2012). That finding may reflect that having more education and higher socioeconomic resources makes it more likely that positive things will happen. Other research suggests that low levels of social support from parents and other family members can lead to high levels of pessimism in children (Ciarrochi & Heaven, 2008).

By middle school, children's levels of optimism or pessimism begin to be shaped in part by peers in addition to family, as evidenced by a study in Spain (Orejudo et al., 2012). Specifically, middle school boys who had positive experiences with peers at school tended to be more optimistic than pessimistic; girls demonstrated similar patterns with respect to peers but were also more affected by the family, expressing more pessimism when communication with family was negative. Research with adolescents in the Netherlands and in other nations also found evidence that teens' attributional style was influenced by learning as well as by genetic factors (Lau et al., 2006; Mavioglu et al., 2015).

Optimism tends to increase, and pessimism to decrease, through childhood, adolescence, young adulthood, and adulthood, then it begins to decline after middle age and into late adulthood (Purol & Chopik, 2021). If people can maintain an optimistic explanatory style into old age, they will have more well-being. States showed that those who were more optimistic reported greater subjective well-being and less depression than younger people (Hirsh et al., 2014; Isaacowitz, 2005a; Leung et al., 2005; Olson et al., 2014).

Pause for Reflection

Has your level of optimism versus pessimism changed throughout your life?

Correlates of Optimism and Pessimism

Optimism is associated with many outcomes in diverse domains of life, including athletic performance, cognitive ability, academic success, and physical and mental health.

Performance

Optimism supports physical performance and expertise, cognitive flexibility, and success in school and at work. Optimism in playing sports was studied in France and was found to affect how well an athlete can dribble a basketball. When 14- to 16-year-old boys and girls were led to believe that they had failed a dribbling contest, those who scored high in optimism were less anxious and more confident, and performed better in a second test than those high in pessimism (Martin-Krumm et al., 2003). Similar results emerged in a very different context. In research with professional cricket players in the United Kingdom, those with more optimistic explanatory styles experienced less poor performance associated with stress (Brown et al., 2020).

Optimism and pessimism may shape attention and cognitive functioning. This was demonstrated in research on college students' responses to positive and negative stimuli. Students who scored high on pessimism were more likely to pay attention to negative stimuli; students who scored high on optimism attended to both positive and negative stimuli (Segerstrom, 2001).

A study of college students in Germany found that optimists were flexible and adaptable in their cognitive activities, whereas pessimists were more often inflexible, rigid, and likely to give up pursuing their goals (Weber et al., 2007).

Flexible cognitive abilities may enable optimists to perform better in school and at work. Indeed, studies in America and Kuwait demonstrate that college students higher in optimism typically earned better grades than people higher in pessimism (El-Anzi, 2005). In another study, when pessimists received lower grades than their peers, they reported being more depressed about it than did optimists who received lower grades than their peers (Gibbons et al., 2000).

Similarly, when it comes to the workplace, research suggests that optimism is a positive predictor of productive outcomes, with optimists having more success in the professional context than pessimists (Forgeard & Seligman, 2012). This may be due to people high in optimism being highly engaged and persevering through work challenges, in responses to which

pessimists might quit (Mäkikangas & Kinnunen, 2003; Schulman, 1999; Seligman & Schulman, 1986).

Mental Health

Optimism is associated with less depressive symptomatology, and pessimism is associated with more depression (Achat et al., 2000; Giltay, Zitman, et al., 2006). A feeling that tends to covary with depression is the feeling of being unable to control life events. Seligman referred to depression as the "ultimate pessimism." People who are clinically depressed often believe they are helpless, seeing little point in trying to do anything because they do not expect things to work out well for them (Seligman, 1990).

According to Seligman, the important difference between people who experience shorter bouts of depression and those who experience symptoms for a longer time is their explanatory style. Pessimists formulate explanations about negative situations in personal and pervasive terms, saying, for example, "It's all my fault," "It's always going to be this way," or "It's going to affect every aspect of my life."

This is true across a range of age groups. Research with children from third to sixth grade found that those highest in optimism had fewer symptoms of depression and fewer behavioral problems than children lower in optimism (Ey et al., 2005). College students in the United States who scored higher on optimism at the beginning of their first semester also experienced significantly less stress and depression during that semester than those who scored lower on optimism (Brissette et al., 2002). Similarly, middle-aged American adults who scored high in optimism reported fewer symptoms of depression than those who scored high in pessimism (Chang & Sanna, 2001). Optimists tend to feel happier and experience less depression, anxiety, and hostility, as evidenced in research with Black and Latina grandmothers in the United States and Muslim university students in Kuwait and Oman (Abdel-Khalek & Lester, 2010; Alansari & Kazem, 2008; Conway et al., 2008). In line with that work, research in the United States and in Finland found that adults high in pessimism were more likely to take antidepressant medication and to be at risk for suicide than those who scored high on optimism (Chang et al., 2013; Kronstrom et al., 2014).

Not surprisingly, stressful life experiences can affect one's level of optimism. A group of adults who were primary caregivers for relatives with Alzheimer's disease were compared on measures of optimism–pessimism with a group of adults who were not acting as caregivers. The caregivers grew increasingly pessimistic over a four-year period and experienced greater anxiety, stress, and physical health complaints (Robinson-Whelen et al., 1997).

Optimism is not only associated with fewer symptoms of depression, but it is also associated with more positive feelings and psychological well-being. Optimists tend to be happier, have better moods, and have more experiences of well-being, as evidenced by work done with people from Sweden, Lithuania, and the United States (Daukantaite & Bergman, 2005; Daukantaitė & Zukauskiene, 2012; Scheier et al., 2001).

Why do people higher in optimism have better mental health? They tend to cope better. Research with adults in Russia found that people who were higher in optimism experienced more positive mental health in part due to their feeling gratitude, tending to savor the moment of their experiences, and high positive self-esteem (Grandchampa et al., 2021). Optimists also tend to engage in healthier coping techniques than pessimists, including actively coping to address problems directly rather than engaging in denial, ignoring stressors, or withdrawing emotionally (Nes & Segerstrom, 2006).

Research in Finland found that optimists recovered psychological well-being following the severe illness or death of a family member more quickly than did pessimists (Kivimaki et al., 2005). Among a group of women in Norway diagnosed with breast cancer, those who scored high on pessimism were far more likely to be anxious and depressed one year following treatment than those who scored low on pessimism (Schou et al., 2004). Another study of these same women found that their levels of optimism and pessimism remained stable for the year following treatment regardless of whether their prognosis was favorable or unfavorable (Schou et al., 2005). Breast cancer patients who score high on optimism have also been found to function better socially and mentally and to report a higher quality of life than those who score high in pessimism (Colby & Shifren, 2013).

Physical Health

Like mental health, optimism versus pessimism facilitates physical health. People higher in optimism tend to have better physical functioning and ability (Kim et al., 2014), have better cardiovascular health (Rozanski et al., 2019), and recover more quickly from sickness or surgery (Forgeard & Seligman, 2012). Studies of Black and Latina grandmothers who were the primary caregivers for their grandchildren,

and of Muslim college students in Kuwait and Oman, demonstrated that those who scored high in optimism reported fewer sleep disorders than people high in pessimism (Abdel-Khalek & Lester, 2010; Alansari & Kazem, 2008; Conway et al., 2008).

Optimists tend to develop stronger immune systems and are more likely to recover from heart attacks and to experience less pain and fewer symptoms following heart surgery than pessimists (Peterson & Seligman, 1987; Peterson et al., 1993; Ronaldson et al., 2014).

A study of first-semester law school students found that those who scored high in optimistic explanatory style had a significantly greater number of T-cells and NK cells, which protect against infections, than those who scored low on optimism (Segerstrom & Taylor, 1998).

According to Seligman, pessimists tend to believe that their actions are of little consequence and, as a result, are unlikely to try to prevent illness by changing their behavior with regard to smoking, diet and exercise, or timely medical attention. Accordingly, optimism is linked to better health outcomes in part through health behaviors. A study of young adults found that optimists were less likely than pessimists to get sick. However, when optimists did get sick, they were far more likely to take responsibility for their care, such as resting, consulting a physician, or drinking appropriate fluids, relative to pessimists (Peterson et al., 1993). Similarly, people high in optimism versus pessimism more accurately self-report their health status and medication-taking and demonstrated more nutritional knowledge, which is essential for healthcare providers to make tailored treatment plans for patients, as a study in Taiwan with university students found (Lee et al, 2016).

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Optimism is linked with better health outcomes, largely through health behaviors.

As discussed in the prior section, people high in optimism also tend to cope in healthy ways, more so than people low in optimism. Optimists are more likely to cope better with health problems, to recover faster from certain medical procedures, and to manage stress better (Aspinwall & Tedeschi, 2010). Research has even found that people whose romantic partners are optimists, versus pessimists, reap the health benefits, including better self-reported health, physical functioning, and less time spent sick (Chopik et al., 2018).

Largely due to the health benefits of optimism, people high in that trait often live longer than pessimists (Giltay et al., 2006). Elderly people in England who scored high in optimism were in far better physical health than those who scored low (Steptoe et al., 2006).

A longitudinal study of nuns in the United States found that those who displayed optimism in their life stories written in their young 20s had a significantly lower death rate when surveyed 60 years later than those who displayed pessimism in their early writings (Danner et al., 2001). Likewise, a study of patients under treatment for a variety of medical conditions suggests that optimists had 19 percent greater longevity than pessimists when both groups were surveyed 30 years later (Maruta et al., 2002).

Pause for Reflection

Are there other domains of life in which you think optimism and pessimism play a role?

Diversity and Optimism and Pessimism

Culture

Cultural differences in explanatory style have been well documented, with some evidence of differences by cultures' extent of collectivism versus individualism. Early work measured optimism–pessimism in college students in the United States and in China (Lee & Seligman, 1997). White American participants were more optimistic than Chinese Americans, and Chinese American people were more optimistic than Chinese people (Lee & Seligman, 1997). A comparison of college students in the United States and Japan found that Japanese students were more pessimistic than American students. The American students were far more likely to predict that positive events would happen to them rather than to other people. In contrast, Japanese students believed that

positive events were much more likely to happen to other people (Chang et al., 2001; Chang & Asakawa, 2003). Similarly, college students in Kuwait scored significantly lower on optimism than college students in the United States (Abdel-Khalek & Lester, 2006). There are also some differences in the extent to which people across cultures follow the usual developmental trend of optimism (Chopik et al., 2020; Schwaba et al., 2019). Research suggests that the average trajectory in Germany and the Netherlands differs from the usual increase until adulthood with a decline after middle age and into late adulthood.

Pause for Reflection

What are other sources of diversity that interact with optimism or pessimism to predict outcomes?

The Downside of Optimism

An optimistic explanatory style may not always be of value (Schneider, 2001). For example, some optimists may hold unrealistic views about their vulnerability to the effects of their behavior. As a result, they may drink or use drugs to excess, telling themselves that such behaviors cannot hurt them, despite evidence to the contrary. Among American college students gambling at a casino, the optimists were far more likely to continue gambling in the face of consistent losses, whereas the pessimists were more likely to stop (Gibson & Sanbonmatsu, 2004). Compared to pessimists, optimists are less efficient when it comes to updating their beliefs with new information because they are insensitive to when their optimism is in error (Sharot et al., 2011).

Unrealistic optimism—the belief that good things are much more likely to happen to oneself than to others—is more widespread in individualist cultures such as the United States than in collectivist cultures such as China and is more prevalent among men than women (Lin & Raghubir, 2005).

Optimism also comes with higher expectations that might be harder to meet. For example, highly optimistic college students who expected to perform well on an exam experienced greater disappointment after receiving their scores than did those who had been less optimistic about their exam performance (Sweeny & Shepperd, 2010).

On the other hand, unrealistic pessimism in the face of adversity, such as a serious illness, may also be harmful. Telling yourself that you will never be able to cope or overcome the situation (thus also exhibiting low self-efficacy) may lead to less effort and, consequently, less success (Blanton et al., 2001).

There is thus value in flexibility of explanatory style—making different attributions depending on the specific context or event. Being higher in explanatory flexibility is associated with better mental health, whereas being lower in explanatory flexibility is associated with higher rates of major depressive disorder and generalized anxiety disorder (Lackner et al., 2015).

Highlights

Research on Seligman's Concept of Optimism

High optimism is associated with:

- Excellent athletic ability
- Cognitive flexibility
- Better academic performance
- More work engagement and success
- Less depression and more psychology well-being, especially due to better coping
- Better physical health and quicker recovery, especially through more health behaviors

Reflections on Learned Helplessness and Optimism Versus Pessimism

The concepts of learned helplessness and optimism versus pessimism have generated hundreds of research studies. Seligman, his associates, and other researchers have applied the concepts to sports, politics, religion, child rearing, job performance, and to understanding depression. Overall, a large and impressive body of data supports the learned helplessness concept.

Seligman proposed a program of exercises to teach optimism to adults and to children, thus applying his findings beyond the laboratory to the home and the workplace. He has since extended his ideas to positive psychology and the factors that influence subjective well-being. In other words, "What makes us happy?"

Regrettably, techniques similar to those used in the lab to induce learned helplessness have been applied by the Central Intelligence Agency (CIA) and other intelligence agencies. Prisoners have been placed in situations where no escape from painful stimuli is possible, such as waterboarding or being placed in small, dark places for long periods of time.

After exposure to such conditions, the prisoners exhibited the same symptoms of learned helplessness as subjects in the laboratory experiments. They became compliant and no longer tried to do anything about their conditions. When Seligman learned about this years later, he was "grieved and horrified" at the use to which his ideas had been put (McCoy, 2014).

Positive Psychology: Focusing on Happiness

Positive psychology was advanced by Seligman in the late 1990s during his term as president of the American Psychological Association. He thought psychology should deal with the best of human functioning—happiness, excellence, and optimal human growth.

Different Kinds of Happiness: Meaning and Flourishing

Seligman distinguished three distinct types of happiness:

- Positive emotion: the pleasant life
- Engagement: the engaged life
- Meaning: the meaningful life

The pleasant life consists of a great deal of positive emotion such as satisfaction, job contentment, serenity, and optimism. Having positive emotions such as joy, interest, love, and enthusiasm is linked to subjective well-being (Frederickson, 2001). Similarly, negative emotions detract from a sense of well-being. When people prioritize positive experiences, they then experience positive emotions, which over time contribute to life satisfaction, as evidenced in a longitudinal study with adolescents in the Philippines (Datu & King, 2016). Similarly, research with Chinese college students found that positive feelings were associated with life satisfaction through hope agency, which is actively pursuing one's goals (Chang et al., 2019). Thus, the pleasant life is related to the engaged life.

The engaged life consists of engagement, involvement, purpose, commitment, and absorption in work. As Seligman noted, "time passes quickly" for of person high in engagement. "Attention is completely focused on the activity. The sense of self is lost" (Seligman et al., 2006, p. *777).* People experiencing life as full of engagement also experience more purpose in life and, in turn, more life satisfaction, evidenced by a study with ethnically diverse people in Singapore (Lee et al, 2015). Other scholars highlight that engagement in nonwork, leisure activities are important for maintaining a joyful, connected, discovered, composed, and empowered life (Iwasaki et al., 2018). Research indicates that having a purpose in life is related not only to finding meaning in life but also to healthy aging and longevity (Hill & Turiano, 2014).

The meaningful life involves using one's talents, abilities, and strengths to belong to, serve, or commit to some enterprise larger than the self. This could be a religion, organization, political party, ideal, or anything else that transcends the self. Living a meaningful life, Seligman wrote, "produces a sense of satisfaction and the belief that one has lived well" (Seligman et al., 2006, p. *777).* His research has shown that the pursuit of meaning and engagement is much more strongly correlated with happiness than the pursuit of pleasure (Schueller & Seligman, 2010).

Much other work supports that contention. In a longitudinal study of intellectually gifted adults in Austria and Germany, the more generative, or committed to giving to and mentoring younger generations, individuals were, the more life meaning and subjective well-being they experienced over time (Vötter & Schnell, 2019). The more that people engage in prosocial behaviors, such as volunteering and spending money to benefit others, the more meaning in life they perceive (Klein, 2017). Research with Chinese adults demonstrated that people who tend to experience more awe—the experience of positive feelings such as admiration and elevation in response to stimuli that feel vast like aesthetic beauty, exceptional ability, or moral goodness—experienced more meaning in life and, in turn, subjective well-being (Zhao et al., 2019).

In 2012, Seligman published a book titled *Flourish: A Visionary New Understanding of Happiness and Well-Being.* He argued that "flourishing" is a better term than "happiness" or "well-being" to describe those who stand at the top of the happiness scale, who have positive feelings, engagement, and meaning. This group—approximately 10 to 18 percent of the world's population—includes those who not only feel happy but who also excel in their relationships and accomplishments.

Seligman has concluded that positive feelings alone are not enough to give one's life full and deep meaning. To reach this higher level of flourishing, we must cultivate our talents and abilities, establish deep and meaningful relationships with others, and contribute in a positive and constructive way to the world around us. The feeling of happiness, which he now calls "positive emotion," is but one of five pillars of the flourishing personality. These include positive emotion (of which happiness and life

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There are three types of happiness: positive emotions, engagement, and meaning. People who are flourishing experience all three.

satisfaction are part), engagement, relationships, meaning, and achievement (Seligman, 2011). Indeed, research with Bulgarian university students found that flourishing encompasses happiness, life satisfaction, and extrinsic sources of well-being such as career and intrinsic sources such as love and joy (Bakracheva, 2020). Positive psychology interventions that encourage people to think about positive aspects of each of these domains (i.e., pleasure, engagement, meaning, positive relationships, and accomplishment) can increase happiness and decrease depressive symptoms (Gander et al., 2016).

Seligman's Kind of Happiness

Despite all his success and even celebrity status, Seligman admitted that he was rarely happy in the sense of feeling joyful. In 2010, he ranked himself among the lowest 30 percent of people in terms of positive feelings and emotions. "A life can be perfectly good and perfectly satisfactory," he told a reporter, "with no positive feeling. My life is largely run around meaning and purpose now" (quoted in Burling, 2010, p. 14). Seligman seems to have flourished, even if he felt fewer positive emotions than others.

Pause for Reflection

What kind(s) of happiness do you think you tend to experience? Do you think being high in one entails being high in the others?

Development of Happiness

Like all other personality traits, happiness is shaped by both genetics and the environment, and family is a strong initial source of happiness or lack thereof. The more supportive, attentive, and future-oriented parents are and the less they fight with each other, the happier children tend to be, as evidenced in research in the United States and China (Guo-Xing & Hai, 2006; Rayle, 2005).

Much research suggests that the average pattern of happiness, especially positive feelings and life satisfaction, follows a U-shape: happiness is high in childhood, but begins to decline in young adulthood, with a low in middle age, and increasing after that into old age, as evidenced in a review of over 350 research articles (Blanchflower & Graham, 2021). For example, a survey of more than 300,000 Americans (ages 18–85) found that subjective well-being and life satisfaction were high at 18, declined until around age 50, and then increased to the point where 85-year-olds reported greater life satisfaction than 18-year-olds (Stone et al., 2010). The last few years of life are often marked by somewhat low levels of happiness, though, as evidenced by studies of 70- to 100-year-old people in the United States, England, and Germany (Gerstorf et al., 2008, 2010).

However, as we will discuss below and as some scholars have pointed out, this pattern is on average and does not apply to all people (Galambos et al., 2020), and depends on people's education and wealth (e.g., Blanchflower & Oswald, 2019), romantic relationship status (e.g., Blanchflower & Oswald, 2019), and region of the world (e.g., Bauer et al., 2017; Steptoe et al., 2015). For example, in less developed nations of Eastern Europe and the former Soviet Union, as well as Latin America, happiness tended to decline overall with increasing age (Steptoe et al., 2015).

Correlates of Happiness

What does positive psychology tell us about the happy personality? How do happy people differ from people you would not describe as happy? What aspects of life support happiness? What aspects of life result from happiness? Following Seligman's lead, psychologists have variously labeled the happy personality in terms such as *subjective well-being* or *life satisfaction* and define it as encompassing a cognitive evaluation of the quality of one's life experience and the possession of positive moods and emotions. Thus, happiness has both cognitive and emotional aspects. As you might expect, research has uncovered a variety of factors that can influence and are influenced by happiness.

Academic and Occupational Success

Happiness results from academic and professional success, but it also facilitates success too. Research tends to find that happiness, or subjective well-being, leads to

the kinds of behaviors that bring about success (Boehm & Lyubomirsky, 2008). In a longitudinal study following college students in Canada, researchers found that people who were high in trait happiness—that is, they were chronically high in feelings of happiness across four years of college—had the highest GPAs (Barker et al., 2016). Notably, happy students did best in semesters when they also experienced negative feelings, which supports the ideas that positive and negative feelings are separate and that happy people who deal with stress in productive ways may be particularly successful at accomplishing their goals.

Other researchers examined the happiness and performance of students from the United Arab Emirates (UAE), Saudi Arabia, Egypt, Jordan, Syria, and Pakistan who were attending at a university in Dubai, UAE, during the COVID-19 lockdown (Moussa & Ali, 2022). During this stressful time, the more feelings of happiness students experienced, the better their academic performance.

Economists know that happiness matters for the workplace as well, studying happiness as part of economic science because it is a very important predictor of economic productivity, future income, and labor market performance (Piekałkiewicz, 2017). For example, financial service employees working in major banks in Spain were more effective at work when they felt happier, and, in turn, exhibited more skillful service to customers (Salas-Vallina et al., 2020).

Physical Health

Happiness supports health, and health supports happiness. A review of more than 160 studies confirms that scoring high in subjective well-being predicts greater longevity and better health (Diener & Chan, 2011). As we will discuss in the next section, one important contributor to happiness is positive social relationships. It is unsurprising then that the happier people are in their romantic relationships (i.e., marriages), the longer they live, as evidenced by analyses of data from over 19,200 adults in the United States (Whisman et al., 2018).

As we have discussed, health behaviors tend to link personality traits to health outcomes, and this is no different with happiness. A survey of 25 countries found that those who actively engage in exercise report a higher level of life satisfaction than those who don't exercise (Dolan et al., 2014). This finding was replicated in research with over 15,300 people from 15 European Union countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom): The more that people engaged in physical activity, the happier they were (Richards et al., 2015). Similarly, using cell phone activity and survey data from over 10,000 people, researchers have found that happier people are more active, and people are happier in moments when they're more physically active (Lathia et al., 2017). Perhaps the largest study linking more physical exercise, as well as not smoking tobacco, to more happiness is one that analyzed data from over 1.5 million people from 166 nations via the Gallup World Poll (Diener et al., 2018).

Research with adults in Poland longitudinally assessed physical activity and happiness in three groups categorized based on level of physical activity: active people, beginners, and inactive people (Iwon et al., 2021). Active people were the happiest and had the highest self-esteem; after a month of exercising, beginners significantly grew in their life satisfaction and happiness, suggesting that exercise can lead to happiness.

The link between health and happiness is evident across the life span, including for children and older adults. Children in Chile, ages 8–12, who engaged in physical activity 6 days a week scored higher in life satisfaction and positive affect (García-Hermoso et al., 2020). Research with older adults in Germany (ages 70–103) found that those who experienced health problems and physical limitations in old age experienced a decline in subjective well-being (Kunzmann et al., 2000). Exercise may be a buffer. Both aerobic exercise and resistance or strength training in older adults show a strong positive correlation with happiness (Netz et al., 2005).

Health behaviors beyond exercise also contribute to subjective well-being. In a longitudinal food diary study with nearly 12,400 Australians from ages 15 to 93, people who ate more fruits and vegetables increased in happiness, life satisfaction, and well-being (Mujcic & Oswald, 2016). This is a benefit to happiness equal to size in moving from unemployment to employment.

Unfortunately, the link between perceptions of one's health and happiness varies by race. For example, self-reported health predicts happiness more for White people than for Black people in the United States, as evidenced by a study of over 42,200 Americans (Cobb et al., 2020). This may be because White Americans tend to receive better healthcare than Black and Brown people in the United States (e.g., Hall et al., 2015).

Relationships and Social Support

Healthy relationships and social support are essential for people's happiness. In that same study of over 1.5 million people from around the world, two of the

key predictors of happiness were social capital and the tendency to help others (Diener et al., 2018). This pattern emerges for people of all ages.

Among eighth- and ninth-graders in Finland, having opportunities for social relationships in and out of the school environment correlated highly with subjective well-being (Konu et al., 2002). Adolescents in Israel who felt they had a high degree of social support from the community and from friends were happier than those who felt they had little such support (Ronen et al., 2014). Similarly, happier American adolescents had more positive relationships with peers, reported lower anxiety and depression, had greater hopes for the future, and felt more in control of their lives than less happy individuals (Gilman & Huebner, 2006).

Research in Israel found that life satisfaction was higher in adults with strong social support networks, and that this was particularly important for new immigrants (Litwin, 2005). Similarly, studies in Finland revealed that among recent immigrants, active social support was critical to their psychological well-being (Jasinskaja-Lahti et al., 2006). Researchers examined the link between emotional intelligence and happiness in Chinese adults (Kong et al., 2019). People with higher emotional intelligence receive more social support, and in turn, experience more life satisfaction compared to people lower in emotional intelligence. They also experienced more positive and less negative affect (Kong et al., 2019).

What about socializing online? Results are mixed. A study of adolescents in China found no significant effects on subjective well-being (Biao-Bin et al., 2006); a study of college students in Italy found an increase in subjective well-being (Contarello & Sarrica, 2007); and two studies of adults in Taiwan and America found a decrease in subjective well-being when it came to online socializing (Huang, 2010a; Stepanikova et al., 2010). Results may depend on whether people are engaging in unhealthy comparisons to other people, which can decrease well-being (e.g., Sherlock & Wagstaff, 2019), or whether they are connecting to others in a way they would not be able to otherwise. For people who may not have a lot of social support nearby, like in their neighborhoods, social media use (as long as it's not excessive) can support people's feelings of happiness (Bekalu et al., 2021).

For adults, romantic relationships are particularly important (e.g., Baranowska-Rataj et al., 2014). The evidence is clear from research conducted in more than 40 countries involving some 60,000 people: People in committed romantic relationships (in this case marriage) report higher levels of happiness than people who are divorced, separated, widowed, or who have never married (Carr et al., 2014; Diener et al. 2000). A longitudinal study of married couples followed over a 35-year period concluded that happiness will vary in relation to the happiness of one's romantic partner. The unhappiness of one member of a couple often leads to the unhappiness of the other (Hoppmann et al., 2011).

Recall that the trajectory of happiness over the lifespan entails a drop in midlife. This drop in happiness does not happen for everyone, though, as demonstrated in an analysis of data from the United Kingdom's Annual Population Survey, with about 30,000 participants (Grover & Helliwell, 2019). For people who have a happy and healthy committed romantic relationship (here, marriage), the drop in happiness is less extreme. Moreover, the drop is the smallest or nonexistent for people who view their partner as their best friend too. Friends are especially important in old age. Older people who have stronger social networks and supportive friends report greater happiness than those who are more socially isolated (Pinquart & Soerensen, 2000).

There is one type of social relationship that can reduce happiness, though: Being a parent to a child or children. Happiness has been found to decline for people following the birth of their first child. In general, people who do not have children report greater happiness than people with children; those with very young children express the lowest happiness (Munsey, 2010). The lowest level of happiness has been noted among mothers who are not married, and thus may be less likely to have a partner share parental responsibilities (Ifcher & Zarghamee, 2014).

Pause for Reflection

How has happiness resulted from or fed into your successes, health, and relationships?

Physical Attractiveness

Are attractive or beautiful people happier than people who are less attractive? Research in the United States, Canada, England, and Germany says "yes." Personal attractiveness does seem to increase happiness, but that may be because physical attractiveness generally improves likelihood to have a good romantic partner,

job opportunities, and income potential (Anderson et al., 2008; Bennett, 2011; Hamermesh & Abrevaya, 2011). Another study followed 10,000 Americans from high school into their 60s and found that how physically attractive they were in high school (i.e., facial attractiveness and lower body weight) predicted better psychological well-being and less distress and depression later (Datta Gupta et al., 2016). Relying on the same dataset and new data, other researchers found that such effects may be due to more attractive people's participating in more social organizations, especially in adult life (Palmer & Peterson, 2021)—and we learned that social support is key to happiness.

In addition to the potential pitfalls of obesity for health, which we have learned matters for happiness, attractiveness may be a mechanism by which people with obesity experience less happiness than others, as in Finland (Bockerman et al., 2014).

Although you might think that aiming to be attractive is good for happiness, some research suggests that obsessing about your physical attractiveness can be detrimental to happiness. For example, research with Australian women from 18 to 35 years of age found that time spent on Instagram predicted less satisfaction and more depression, and this is because beauty and fitness images affect people's perceptions of their own attractiveness and therefore anxiety, depression, and well-being (Sherlock & Wagstaff, 2019).

Wealth

Can money buy happiness? Research suggests that the answer is, "Yes, to the extent that basic needs are met; but not much after that point." Studies in Sweden, Turkey, and other European countries found that the lowest level of happiness was reported in low-income households and that a major source of satisfaction is having a cash reserve available to handle emergencies (Berlin & Kaunitz, 2014; Drakopoulos & Grimani, 2013).

A survey conducted in 123 nations (Diener et al., 2010) and one conducted in 166 nations (Diener et al., 2018) found that personal and nation-level wealth predict subjective well-being: the more economic resources, the happier the people. In a study with nearly 12,300 people 15 years or older of diverse racial and ethnic backgrounds in the United States, researchers found that higher income was associated with less daily sadness (Kushlev et al., 2015). Some research suggests that money may be mentioned as an important factor in happiness more frequently by people in the United States than by people in Europe (Mogilner, 2010).

Surveys also find that people who lack the money to provide for essentials are unhappy, but having money significantly beyond what is actually needed has little measurable effect on happiness. Even winning a huge amount in a lottery usually results in only a temporary increase in subjective well-being (DeNeve & Cooper, 1998; Diener et al., 1999; King & Napa, 1998; Pappas, 2010).

So, if you believe all you need to be happy is a bigger house or more expensive car, think again. More and costlier possessions do not guarantee happiness. One researcher concluded: "The more people endorse materialistic goals, the less happy and satisfied they are with life" (Van Boven, 2005, p. 133). Other research has shown that people with relatively higher incomes tend to experience greater stress and to devote less time to relaxation and leisure activities than those with lower incomes (Kahneman et al., 2006).

Also important is what people spend money on. Researchers examining 76,000 bank-transaction records in the United Kingdom demonstrated that the more individuals spend on products that match their personality, the higher their life satisfaction (Matz et al., 2016). Generosity with one's wealth is also known to increase happiness, and such generous decisions activate morality- and reward-related regions of the brain (Park et al., 2017).

Goals

People higher in subjective well-being differ from people lower in subjective well-being in terms of their motivations and goals, with future-oriented, intrinsically motivated, and process-focused goal pursuit being most likely associated with happiness. One research review concluded that life satisfaction was enhanced when the goals people set for themselves were concerned with personal growth and community contributions and were considered realistic and of value to the culture. People rated high in life satisfaction were intensely committed to achieving their goals and believed they were making progress toward those ends (Klug & Maier, 2015; Lyubomirsky, 2001).

Research with more than 3,000 managers in the United States (ages 25–74) found a strong positive relationship between life satisfaction and an orientation

toward the future, which included actively planning for the future. The relationship was greater for older managers than younger managers (Prenda & Lachman, 2001).

The more intrinsic a person's goals, the more subjective well-being they experience, largely because psychological needs are being met, as suggested by studies with Chinese adolescents and Iranian medical students (Li & Feng, 2018; Talepasand, 2020).

In a theoretical review of goals and happiness, researchers suggest that pursuing goals with a process focus (i.e., concentrating on the means of accomplishing the goal) rather than on the outcome itself is associated with more subjective well-being and goal success (Kaftan et al., 2018).

The content of one's goals and goal accomplishment matters too. In Germany, research showed that the most important choices among life goals relating to happiness included the characteristics of one's partner, a healthy lifestyle, a proper balance between work and leisure, and social involvement (Headey et al., 2010).

Other Personality Traits

A large body of research has examined how various other personality and character traits are associated with happiness, subjective well-being, and positive affect.

In a study of the trajectory of well-being across old age in German adults, researchers found that life satisfaction, morale, and emotions (anger, fear, sadness, happiness) were stable across old age (Potter et al., 2020). Furthermore, more physical ailments and weakness, slow perceptual processes, lower extraversion, and higher neuroticism predicted lower life satisfaction, morale, and positive affect and higher negative affect, for example. Research in the United States has linked higher levels of trait mindfulness and self-compassion to more well-being (McKay & Walker, 2021). Personal values were also associated with happiness. The more people value security, conformity, benevolence, self-direction, stimulation, hedonism, achievement, and power, the happier they expect to be in the future (Kajonius, 2021). Much additional research has linked happiness and its many forms to the five factors of personality, self-efficacy and locus of control, and personality traits associated with thinking positively.

The Big Five The general pattern is that people who score low on neuroticism and high on extraversion, agreeableness, conscientiousness, and openness to experience report high levels of subjective well-being, and these results emerge across diverse cultures (DeNeve & Cooper, 1998; Gomez et al., 2009; Hayes & Joseph, 2003; Keyes et al., 2002; Libran & Howard, 2006; Lynn & Steel, 2006; Marrero Quevedo & Abella, 2011; Siegler & Brummett, 2000; Solo, 2015; Staudinger et al., 1999; Zhang & He, 2010). For example, a study of diverse Asian (i.e., Chinese, Korean, Indian, Pakistani, Filipino, Vietnamese) American freshmen found that extraversion, conscientiousness, and agreeableness positively predicted subjective well-being (Lui et al., 2016). Furthermore, for people high in extraversion, more optimism was linked to meaning-related well-being; and for people high in neuroticism, lower optimism was linked to lower physical well-being.

How do personality and happiness affect each other over time? In longitudinal research examining happiness and personality in a large, nationally representative sample of 16,367 Australians ages 15 to 93, happiness affected personality and personality affected happiness: people who were initially high in extraversion, agreeableness, conscientiousness, and emotional stability (low in neuroticism) became happier, or increased in subjective well-being, and people higher in well-being became more agreeable, conscientious, emotionally stable, and introverted (Soto, 2015).

Personality traits are linked to happiness because people high in the traits of extraversion, agreeableness, conscientious, openness to experience, and emotional stability (low neuroticism) engage in situations and behaviors characterized by those traits, which brings them positive feelings, which add up across time to give rise to feelings of happiness (Kritzler et al., 2020).

Even average levels of personality and happiness across a whole country have been linked. A study in 39 nations of Eysenck's three personality factors, and a

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People high in extraversion, conscientiousness, agreeableness, and openness to experiences and low in neuroticism tend to be happier.

study in 26 nations of the Big Five factors, found that low neuroticism and high extraversion correlated significantly with national levels of subjective well-being (Steel & Ones, 2002).

Overall, the importance of the primarily inherited factors of neuroticism, extraversion, and agreeableness as influences on subjective well-being in so many different cultures suggests that life satisfaction and happiness have a strong genetic component (Maranges & Reynolds, 2020). This is supported by findings with our evolutionary relatives: The happiest orangutans in zoos in the United States, Canada, and Australia were those rated by zoo employees as being high in extraversion, low in neuroticism, and high in agreeableness (Weiss et al., 2006).

The personality of important others can also affect our happiness, likely through both genes and environment. In a study of over 300 families with adolescents in China, children's subjective well-being increased over time if their parents were highly extraverted but decreased if their parents were highly neurotic (Fan et al., 2020).

There are some drawbacks to some happiness-linked personality traits. A study in Germany on nearly 10,000 adults demonstrated a possible negative effect of being highly conscientious. Among those who had lost their jobs, those highest in conscientiousness experienced a far greater drop in life satisfaction than those low in conscientiousness (Boyce et al., 2010). In a 12-day study, people who engaged in extraverted and conscientious behavior felt higher positive mood and lower fatigue during those behaviors but more mental fatigue later in the day, as demonstrated in a study of Finnish university students (Leikas & Ilmarinen, 2017).

Self-Efficacy and Internal Locus of Control

Both self-efficacy and internal locus of control are positively related to life satisfaction. In general, we are happiest when we feel competent in coping with life and in control of our lives.

University students in South Africa who scored higher in self-efficacy were also more satisfied with and happy in life (van Zyl & Dhurup, 2018). A study of college students in the United States and in South Korea identified four factors contributing to happiness: autonomy, competence, relatedness, and self-esteem (Sheldon et al., 2001).

Self-efficacy is particularly important in stressful contexts. For example, psychiatric nurses, who face many emotional workplace stressors, who were higher in self-efficacy were happier than nurses lower in self-efficacy, as evidenced in a study in national hospitals in South Korea (Song et al., 2017). Likewise, when facing the stressors of COVID-19 lockdown in Italy, university students with higher self-efficacy were better at coping with negative emotions and experienced higher subjective well-being as a result (Cattelino et al., 2021).

Studies in Germany and in Australia confirmed that the feelings of self-mastery and being in control of one's life were strongly related to subjective well-being (Lang & Heckhausen, 2001; Windsor & Anstey, 2010). Autonomy (having a strong sense of self-determination) is a significant contributor to happiness (Schmutte & Ryff, 1997; Sheldon et al., 2005). Similarly, adolescents in India with internal locus of control experienced more happiness (Soni et al., 2020).

Thinking Positively

There are many personality traits that relate to thinking positively, which positively influences overall happiness.

Two studies—one of more than 13,000 college students from 31 countries, and the other of more than 7,000 students from 41 countries—found significant differences in the ways happy and unhappy people perceive, judge, and construe events in their lives. "In assessing their life satisfaction, unhappy individuals appear to give greater weight than happy individuals to what might be wrong in their lives. . . . In contrast, happy individuals see through the proverbial rose-colored glasses and weigh the positive aspects of their lives more heavily than do unhappy individuals" (Diener et al., 2002, p. 444).

Research with elderly people in Slovakia also demonstrated the relationship between attitude and happiness. Those who scored high in what the researchers called "a belief in a just world" reported greater happiness than those who did not subscribe to such a belief (Dzuka & Dalbert, 2006). Another study with older Germans hospitalized with various disabilities found that it was not the physical impairments that decreased subjective well-being as much as the person's attitude toward the infirmity. People with more positive attitudes scored higher in subjective well-being than those who expressed negative attitudes (Schneider et al., 2006).

Appreciating what one has and positive feelings can feed into happiness. As mentioned earlier, people higher in emotional intelligence tend to be happier. Researchers in Poland demonstrated that this is due in part to people high in emotional intelligence savoring their positive emotions rather than dampening them (Szczygieł & Mikolajczak, 2017). Research in

England with university students found that gratitude was strongly related to subjective well-being. The more grateful people were for their personal circumstances, the happier they were (Wood et al., 2009). Similarly, an intervention with children in Wales classrooms that encouraged them to write down three good things that happened to them each day was found to increase happiness and decrease depressive symptoms in children aged 8 to 11, especially for very unhappy children (Carter et al., 2018). Positively thinking about happiness itself can affect happiness. People who believe that happiness is stable are more optimistic, and this leads to more actual happiness, compared to people who think happiness is fragile and think more negatively and pessimistically (Joshanloo et al., 2017).

Pause for Reflection

Of all the traits we have learned about, which do you think are most important to happiness?

Diversity and Happiness

Race and Ethnicity

Connection to one's racial and ethnic identity and community are important contributors to well-being. In multicultural societies, people with a stronger sense of ethnic identity rated higher in subjective well-being than people with low levels of identifying with their ethnic heritage (Le et al., 2009). Likewise, people tend to have higher life satisfaction when they are surrounded with people of the same race or ethnicity, a study of over 15,100 Americans finds (Kanazawa & Li, 2015).

Research with Black college students in the United States found that those who felt a greater sense of identification with and acceptance by the Black community at their college or university reported higher levels of psychological well-being than those who felt less of an identification with and acceptance by fellow Black students (Postmes & Branscombe, 2002).

This may be in part because of stronger feelings of belonging and less discrimination. Black college students who reported higher levels of perceived racial discrimination had lower levels of life satisfaction as well as greater symptoms of depression (Prelow et al., 2006; Seaton & Yip, 2009). Similarly, a study of older Black adults (ages 55–93) found lower levels of life satisfaction among those who reported the stresses of racial discrimination (Utsey et al., 2002). When diverse people and ethnic minorities perceive multicultural policies and practices, their well-being tends to be higher, and this is in part due to feeling like they belong (Ward et al., 2020).

Ethnic groups may also hold different beliefs that shape their experience of happiness. In a study of mixed emotions in Chinese people of different ethnicities, researchers found that Han Chinese people who held implicit contra-hedonic attitudes toward happiness experienced more mixed emotions during pleasant emotional events compared to Mongolian Chinese people (Deng et al., 2016).

Culture

Across different cultures, the experience, types, and sources of happiness vary. Descendants of immigrants from other cultures tend to reflect the subjective well-being characteristic of those cultures, even in the absence of continued direct contact. For example, people in Denmark and in Sweden report high subjective well-being, as do Americans whose ancestors came from these countries. Americans whose ancestors came from cultures with lower levels of subjective well-being, such as Hungary and Lithuania, have similarly lower levels of subjective well-being (Rice & Steele, 2004).

Studies conducted in collectivist Eastern cultures such as China and Turkey revealed little relationship between social support and subjective well-being (Dan et al., 2006; Turkum, 2005). Research with college students in Turkey found that the chance to provide social support to other people was significantly related to psychological well-being, but receiving social support from others had no effect on psychological well-being (Gencoz & Ozlale, 2004). Subjective well-being is markedly higher in individualist cultures such as the United States than in collectivist cultures such as China (Diener et al., 1995; Park & Huebner, 2005; Wirtz et al., 2009).

Individualism versus collectivism may influence which sorts of situations give rise to feelings of happiness. By studying individuals during positive shared and nonshared events, researchers found that Japanese young adults experienced more happiness in

shared, compared to nonshared, situations, whereas Americans experience happiness to the same extent across situations on average (De Almeida et al., 2022). Researchers developed a measure of "interdependent happiness," which captures happiness of individuals who are relationally-oriented. People high in interdependent happiness were also high in subjective well-being and interdependent self-construal across diverse samples of Japanese students; American students; working adults in the United States, Germany, Japan, and Korea; and Japanese adults and older adults from collectivist regions of the country (Hitokoto & Uchida, 2015).

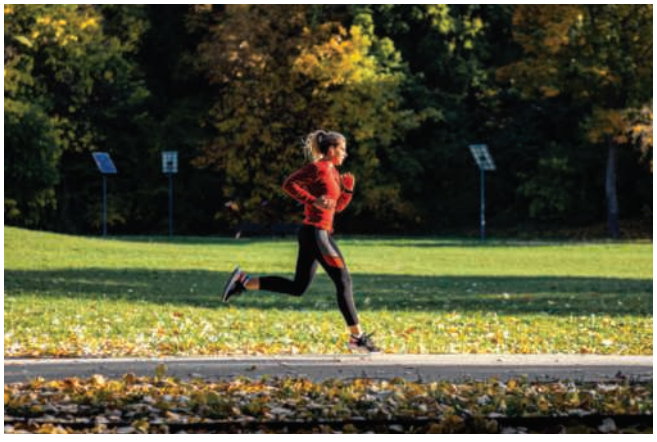
In a large-scale study with nearly 9,000 participants from the United States, Sri Lanka, Cambodia, China, and Mexico, researchers examined six domains of flourishing: happiness and life satisfaction; physical and mental health; meaning and purpose; character and virtue; close social relationships; and financial and material stability (Węziak-Białowolska et al., 2019). For people across all cultures, well-being in these domains constituted flourishing, but there were important cultural differences. Although Americans had the highest financial and material stability and scoring relatively high in happiness and life satisfaction, people in the United States reported the lowest physical and mental health, meaning and purpose, character and virtue, and close social relationships. People in China reported the highest social relationship and health domain flourishing. People in Cambodia were particularly high in happiness and life satisfaction as well as character and virtue. Participants in Mexico had the lowest scores in financial and material stability, but the highest meaning and purpose in life flourishing. Sri Lankan people reported the lowest scores in happiness and satisfaction. Other work finds that cultures that value relationships and social capital, femininity, and individualism tend to have happier citizens (Steel et al., 2018).

Geography

Where you live is important for happiness. A nationwide survey of Americans (ages 25–75) found different criteria for happiness in various parts of the country (Plaut et al., 2002). People in the New England states considered physical well-being, autonomy, and not feeling constrained as necessary for subjective well-being. People in western south-central states (Texas, Oklahoma, Arkansas, and Louisiana) reported a greater concern with personal growth and feelings of cheerfulness and happiness as criteria for subjective well-being. Those in eastern south-central states (Kentucky, Tennessee, Mississippi, and Alabama) focused more on social responsibility and contributing to the welfare and well-being of others as necessary for their own feelings of happiness.

Other research found that subjective well-being was highest in the west coast and mountain states, moderately high in the east coast states, and lowest in the midwestern and southern states. Overall, happiness was significantly related to higher income, higher level of education, and greater tolerance for the views of other people (Rentfrow et al., 2009). Indeed, wealth is important for happiness not just in terms of personal wealth, but also in terms of the wealth of one's region and country.

A study conducted in regions of Germany over a 24-year period found that as people aged, the life satisfaction of those living in affluent areas remained higher than those living in less affluent regions (Gerstorf et al., 2010). A nation's relative wealth is of major importance when it comes to happiness. Countries marked by such poverty that satisfying basic needs is difficult have much lower levels of happiness than more economically advanced countries (Diener et al., 1995; Veenhoven, 2005). Those who live in wealthier countries rate themselves as happier than people in impoverished countries (Delhey & Dragolov, 2015; Diener et al., 2010; Doherty & Kelly,



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Where you live matters for your happiness. Places that provide access to nature and spaces that facilitate physical activity also facilitate psychological well-being and happiness.

2010; Howell & Howell, 2008; Minkov, 2009). Notably, Denmark consistently ranks highest in happiness (Hussain, 2014). That country's people tend to have all their basic and psychological needs met.

The benefit of social and information connection via the internet is different for people depending on their own and their nation's wealth. Overall, research with a large sample of people from a variety of rich and poor nations found that people with lower incomes or who lived in developing nations reported greater life satisfaction as a result of having access to and using the internet (Penard et al., 2013).

As we have discussed, physical exercise is important for happiness. However, not all places enable people to get outdoors and exercise; accordingly, living in a place with safe locations to engage in activities like walking are essential for physical-activity-related emotional well-being (Ettema & Smajic, 2015).

Places that feature nature and natural beauty—think parks, gardens, street greenery, lakes, and the ocean—can have therapeutic qualities and facilitate health and well-being, especially for older adults (Finlay et al., 2015). Similarly, biodiversity in parks and nature reserves has positive effects on visitors' well-being (Carrus et al., 2015).

Pause for Reflection

Can you think of other sources of diversity that interact with locus of control to predict outcomes?

Highlights

Research on Seligman's Concept of Happiness

High happiness is associated with:

- A U-shaped developmental trajectory: relatively higher happiness in childhood and young adulthood with decreases into midlife and increases after the midlife crisis into old age. Happiness may decrease slightly in very old age.
- Academic and occupational success
- Physical health, largely through engaging in more health behaviors
- Healthy relationships and social support, including friendships and romantic relationships
- Physical attractiveness, but not an obsession with being attractive
- Wealth, both of individuals and nations
- Goals pursuit
- Higher extraversion, conscientiousness, agreeableness, and openness to experience, and lower neuroticism
- Internal locus of control and higher self-efficacy
- Positive thinking

Reflections on Seligman's Positive Psychology

Seligman's original call for a positive psychology received an enthusiastic response. In 2000, only two years after he introduced the topic, the *Journal of Happiness Studies*, the first such journal in the field, began publication. In 2002, he published a popular book titled *Authentic Happiness: Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment.* The book was highly praised in reviews; *Newsweek* described the positive psychology movement as a new age for psychology. *Time* magazine featured Seligman's picture on the cover and published a 40-page special issue. At Harvard the most popular undergraduate course, with enrollments exceeding 800, was on positive psychology. In 2006, the *Journal of Positive Psychology* began publication. Positive psychology as a distinct branch of psychology has become phenomenally successful and widespread.

In 2012, the Girl Scouts of America instituted a Science of Happiness Badge, which members earn by undergoing a month-long course in strategies and techniques for achieving happiness (Wojcik, 2012). By 2014, more than 10,000 journal articles were being published annually; seminars were held, books written, and popular magazines and talk shows were praising its goals. By 2023, a Google Scholar search for "happiness" generated over 3 million hits.

Pause for Reflection

How do you think that locus of control, sensation seeking, learned helplessness, optimism versus pessimism, and happiness relate to one another?

DEI Spotlight

Happiness and Locus of Control and Diversity, Equity, and Inclusion

Happiness, forwarded as a psychological construct by Seligman, has been studied as positive feelings, well-being, and meaning. Locus of control was introduced by Rotter and captures whether people believe they or the outside world controls events in their lives. Both are associated with positive outcomes. These concepts have been applied to understand DEI issues of individuals, families, and society.

Individual and Society. Here we focus on an individual researcher, Dr. Shigehiro ("Shige") Oishi, a social and personality psychologist who studies culture, inequality, and happiness. Dr. Oishi says, "I was born and raised in Japan. My parents, grandparents, great-grandparents, indeed all my ancestors as far as I know, lived in one small town. My parents still live there. I left my hometown exactly 20 days after I turned 18 and went to college in Tokyo. After college, I went to Columbia University's Teachers College to study counseling psychology. There, I realized that I was more interested in personality and social psychology than the clinical end of psychology, in particular, culture and well-being. So, I went to the University of Illinois at Urbana-Champaign (UIUC) for my PhD. UIUC was an ideal place to study culture and well-being at that time (1995–2000)" (Oishi Lab, 2023). Dr. Oishi is now a professor at the University of Chicago. He has earned much recognition for his pioneering work on well-being and culture, including, for example, the 2021 Outstanding Achievement Award for Advancing Cultural Psychology.

In featuring the work of Dr. Oishi, we explore insights on the intersection of diverse societies' cultures and happiness. One of Dr. Oishi's important contributions to the field of happiness is work on "psychological richness," which is akin to but more specific than and discernible from Seligman's idea of flourishing.

Oishi and colleagues (2020) write,

> A psychologically rich life is best characterized by variety, novelty, and interest. One problem with happy and meaningful lives is that both *can* be monotonous and repetitive. A person with a steady—perhaps even rewarding—9-to-5 job, happily married with children, may have a happy and, in many respects, meaningful life, but not necessarily a life rich in diverse experiences. . . . In contrast, psychological richness fulfills the need for complex, varied experiences, of the sort that change people's view of the world and their place in it. (p. 108)

In developing a measure of psychological richness, Oishi and colleagues (2019) find that psychological richness is correlated with but distinct from happiness or meaningfulness. They thus introduce a tripartite model of well-being: richness, happiness, and meaning are all important for the good life.

In research with college students and other adults in the United States, Japan, Korea, India, Norway, Singapore, Portugal, Angola, and Germany, Oishi and colleagues (2020) examine associations among people's ratings of their lives' psychological richness, happiness, and meaningfulness. Across all the cultures, having a meaningful life was associated with having a psychologically rich life and a happy life. However, having more psychological richness was not always associated with happiness. Although people in the United States, Germany, Portugal, India, and Angola experienced more happiness to the extent that they experienced more richness, this was not the case for citizens of Norway, Japan, Korea, or Singapore. Overall, the researchers found that

> most people's self-described ideal lives were psychologically rich. When forced to choose, however, the majority favored a happy life (49.7 to 69.9%) or a meaningful life (14.2 to 38.5%). Even so, a substantial minority of participants still favored a psychologically rich life, even at the expense of a happy life or a meaningful life, ranging from 6.7% (Singapore) to 16.8% of participants (Germany). (p. 114)

In follow-up studies with adults in the United States and Korea, the team found that

> these numbers were even higher when desire for a psychologically rich life was measured indirectly. Roughly 28% of Americans and 35%

DEI Spotlight, continued

Happiness and Locus of Control and Diversity, Equity, and Inclusion

> of Koreans reported that their lives would have been psychologically richer, if they could undo the most regretted event of their lives. These data suggest that most people's ideal lives are not just happy or meaningful but also psychologically rich, and that when forced to pick one, a non-trivial number of people desire a rich life more than a happy or a meaningful life. When measured indirectly, just as many people wish their lives were richer as do wish their lives were happier or more meaningful. (p. 114)

In a theoretical reflection on those and other findings, Dr. Oishi and Dr. Erin Westgate (of the University of Florida) suggest that people whose lives are highly psychologically rich tend to be high in curiosity, holistic thinking, and liberal political orientation (Oishi & Westgate, 2023). Together, these works suggest that there is more to well-being than happiness; people crave complex, novel, and interesting experiences as part of the good life. This craving seems to exist across diverse cultures but may relate to other forms of happiness differently across cultures. It also varies in individuals with a cluster of other personality traits.

Dr. Oishi also studies specific predictors of happiness. Working with lead author Dr. Iolanda Costa Galinha (of the Universidade Autónoma de Lisboa and Centro de Investigação em Psicologia in Lisbon, Portugal), Dr. Oishi and colleagues explore the link between personal values and happiness across different cultures, including three countries and continents: United States, North America; Mozambique, Africa; and Portugal, Europe (Costa Galinha et al., 2023).

Overall (or "global") life satisfaction was predicted by the values of:

- Benevolence (preserving and enhancing the welfare of in-group members) in all three countries
- Stimulation (preference for excitement, novelty, and challenge in life) in the United States and Mozambique, not in Portugal
- Tradition (respect, commitment, and acceptance of one's culture's norms and beliefs) in Mozambique and Portugal, not in the United States

Shigehiro Oishi

Dr. Shige Oishi, the Marshall Field IV Professor of Psychology at the University of Chicago, studies the intersection of happiness and cultural diversity.

- Achievement (accomplishing goals that are valued and connote competence and ability in your culture) in Portugal, not in Mozambique or the United States

But they also found cultural differences in how satisfaction in specific domains of life connected the values to overall life satisfaction. This work suggests that cultures may overlap somewhat and differ somewhat in what they value in a happy life, and that they may also differ in how those values are lived out and contribute to a life of well-being.

Family. Now we turn our attention to how family functioning varies by culture and, in turn, locus of control. Much research suggests that many Latino cultures feature norms and values based on beliefs in fate. One source of this is culture built on strong traditional religious beliefs with God directing the events of one's life, and another source is the cultural belief of *fatalismo* (fatalism). These cultural beliefs feed into locus of control, with Latino/as scoring higher in external locus of control than members of other ethnic groups. As we have learned, locus

DEI Spotlight, continued

Happiness and Locus of Control and Diversity, Equity, and Inclusion

of control has implications for health behaviors. This is true and important in the case of parents making decisions about the mental and physical health of their children. To illustrate this point, we focus on research with Latino/a parents of children diagnosed with ADHD in the United States (Lawton et al., 2016). Latino families are less likely to seek out and receive treatment for ADHD compared to other ethnic groups. How might cultural factors influence locus of control and intentions to seek help for a child's ADHD? The researchers found that the Latino cultural values of *familism* (being family-focused) and *respeto* (respect) were positively related to their belief in *fatalismo* (fate), which is related to an external locus of control and lower self-efficacy. The more external the parents' locus of control, the less they intended to seek out treatment for their children's ADHD and the more they assumed the symptoms would go away on their own. The implication of these results is that cultural values should be taken into account when understanding or intervening on the role of locus of control in health decisions.

Chapter Summary

Julian Rotter described those who believe that the reinforcement they receive or events in their lives are under their control as having an internal locus of control; those who believe they have no control over the reinforcements they receive or events in their lives have an external locus of control. Supportive but firm parenting supports children's development of stronger internal locus of control, which tends to increase across the early life span and peaks in middle adulthood. People with stronger internal loci of control feel a stronger sense of personal choice, perform better in school, and are in better physical and mental health.

According to Zuckerman, sensation seeking is an inherited trait concerned with the need for novel and complex sensations and experiences. Four components of sensation seeking are thrill and adventure seeking, experience seeking, disinhibition, and boredom susceptibility. Zuckerman later distinguished between good sensation seeking, which is socialized and nonimpulsive, and bad sensation seeking, which is unsocialized, impulsive, and characterized by high scores on measures of psychoticism. Research supports these ideas. Sensation seeking tends to increase across adolescence, plateauing in young adulthood, and decreasing before remaining steady into older age.

People higher in sensation seeking tend to take physical risks and are attracted to work in which they can take physical risks; engage in antisocial, addictive, and unhealthy risk taking; demonstrate creative and flexible cognitive processes; have lower job and academic performance (when the work does not entail risk taking); and are higher in extraversion and openness to experience. Sensation seeking can also be manifested in prosocial ways. Research suggests that sensation seeking is highly heritable, or genetically based, but some environments evoke it more than others.

Learned helplessness, a construct initially proposed and researched by Martin Seligman, results from our perception that we have no control over our environment and leads to our disengagement from the task or goal at hand. Learned helplessness undermines the immune system and health of both animals and humans. Learned helplessness is more likely to develop in children whose parents are overcontrolling versus supportive. The attribution model of learned helplessness involves attributing a failure to some cause. Pessimists attribute their failures to internal, stable, and global causes. Optimists attribute their failures to external, unstable, and specific causes.

When learned helplessness extends to all domains of life, it can be understood to be pessimism, which is the belief that bad things are likely to happen to and for oneself. Optimism, on the other hand, is the tendency to believe good things will happen to and for oneself. Supportive parents engender more optimism than pessimism in their children. Optimism tends to increase through childhood, adolescence, young adulthood, and

adulthood, then begins to decline after middle age and into late adulthood.

People higher in optimism tend to have better physical, cognitive, academic, and occupational success, as well as to live longer, enjoy better health, and experience less stress and depression than do pessimists. Unrealistic optimism, however, can lead to more disappointment when things don't go well.

Seligman also catalyzed the science of Positive Psychology in focusing on the happy personality. He posited three types of happiness: the pleasant life consisting of a great deal of positive emotion; the engaged life consisting of involvement, commitment, and absorption in work; and the meaningful life consisting of committing one's talents and abilities in the service of a cause or purpose larger than oneself. Flourishing refers to a combination of these types of happiness. Happiness across the life span tends to follow a U-shaped trajectory, with people being happiest at the beginning of life, with a decrease in middle age (i.e., midlife crisis), and increases later in life.

Happiness is associated with academic and occupational success, physical health, supportive and quality relationships, physical attractiveness, wealth of self and nation, and goals. Characteristics of the happy personality include low neuroticism, high extraversion, autonomy, self-esteem, self-efficacy, an internal locus of control, and a sense of being in control of one's life. All of these traits are important to people of diverse ethnic, racial, and cultural identities.

Review Questions

1. Compare and contrast the global and the limited-domain approaches to personality.
2. Describe internal versus external locus of control.
3. How does locus of control develop?
4. List the correlates of internal locus of control, citing at least three research findings.
5. What are the different types of sensation seeking according to Zuckerman?
6. How does sensation seeking develop?
7. List the correlates of sensation seeking, citing at least five research findings.
8. Explain how learned helplessness is developed and how it affects individuals.
9. Analyze how learned helplessness affects mental and physical health.
10. Compare and contrast the processes and outcomes associated with optimism and pessimism.
11. Compare and contrast the trajectories of optimism and happiness over the life span.
12. List and define the three types of happiness that Seligman initially defined.
13. Describe how flourishing relates to the three types of happiness Seligman initially defined.
14. List the outcomes to which happiness is linked.
15. Explain how the five factors of personality relate to each of the following: locus of control, sensation seeking, learned helplessness, optimism versus pessimism, and happiness.
16. Explain how diversity is related to locus of control, sensation seeking, learned helplessness, optimism versus pessimism, and happiness.

Suggested Readings

Locus of Control

- Rotter, J. B. (1993). "Expectancies." In C. E. Walker (Ed.), *The history of clinical psychology in autobiography* (Vol. 2, pp. 273–284). Brooks/Cole. Covers Rotter's graduate training, academic experience, and the early work on locus of control. Also describes the growth of academic clinical psychology programs and related political controversies.

Sensation Seeking

- Brannigan, G. G., & Merrens, M. R. (Eds.). (1993). *The undaunted psychologist: Adventures in research.* Temple University Press. Essays by a diverse group of academic psychologists about the origins of their research interests. Includes a chapter by Zuckerman about personal and intellectual approaches to research.
- Zuckerman, M. (1991). *Psychobiology of personality.* Cambridge University Press. Outlines a behavioral genetics approach to personality and summarizes relevant research from neuropsychology, psychopharmacology, psychophysiology, and abnormal psychology.
- Zuckerman, M. (2007). *Sensation seeking and risky behavior.* American Psychological Association. A comprehensive overview of the research of Zuckerman and many others on the different kinds of behaviors of those who score high in sensation seeking, ranging from sex and crime to hang gliding.

Learned Helplessness

- Seligman, M. E. P. (1975). *Helplessness: On depression, development, and death.* W. H. Freeman. Describes the early research on learned

helplessness, its development in childhood, and its impact on depression and physical health.

- Seligman, M. E. P. (2006). *Learned optimism: How to change your mind and your life.* Vintage. Describes differences in explanatory style between optimists and pessimists, and relates these styles to physical and mental health. Offers techniques for changing pessimism to optimism, and tests to check on your own levels of optimism or pessimism.

Positive Psychology

- Comptom, W., & Hoffman, E. (2012). *Positive psychology: The science of happiness and flourishing* (2nd ed.). Cengage. An overview of positive psychology, its significant research, and its applications to problems of everyday life.
- Fave, A. (Ed.). *The exploration of happiness: Present and future perspectives* (2nd ed.). Springer Science and Business Media. A collection of articles from the *Journal of Happiness Studies* covering major findings, issues, and challenges for future research.
- Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment.* Free Press. A guide to developing positive emotions, positive character, and personal satisfaction.
- Seligman, M. E. P. *Martin Seligman: Journey from learned helplessness to learned happiness.* A personal and professional account of how Seligman changed psychology and himself, http://www.upenn.edu/ gazette/0199/hirtz.html
- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being.* Free Press. Seligman's latest offering on positive psychology and his theory of well-being along with exercises that can be used to increase happiness.

Chapter 15

Personality in Perspective

Learning Objectives

15.1 Compare and contrast evolutionary theories of personality with those of focused, limited-domain personality theories, psychoanalysts, developmental stage theorists, and humanists, providing two examples of similarities and differences for each.

15.2 Describe how evolution by natural selection shapes personality in adaptive ways.

15.3 Define the primal emotions theory of personality.

15.4 Explain the costs and benefits (i.e., trade-offs) of the Big Five personality traits for the individual, for romantic partners, and for social partners.

15.5 Describe how assortative mating and frequency dependence help explain personality variation.

15.6 Compare and contrast the reproductive demands, survival challenges, and personality costs and benefits that males and female faced in our evolutionary past.

15.7 Identify how ecological niches shape personality profiles.

15.8 Summarize the life history theory of personality.

15.9 List the effects of harsh and unpredictable environments on patterns of reproduction, health, antisociality and prosociality, and personality.

15.10 Explain how each of the following factors contribute to personality: the genetic factor, the environmental factor, the learning factor, the parental factor, the developmental factor, the consciousness factor, and the unconscious factor.

15.11 Summarize the components of the whole trait theory and how they interact to give rise to personality.

15.12 Compare and contrast whole trait theory with theories of focused, limited-domain personality theories, psychoanalysts, developmental stage theorists, and humanists, providing two examples of similarities and differences for each.

In this final chapter, we discuss the broadest context and theoretical framework: adaptationist models, which put personality in perspective as characteristics that have different adaptive value across a life span and across evolutionary time. We also review the big themes we've covered. In Chapter 1, we said that our purpose in this book was to explore the forces that shape personality, to try to find out what makes us the way we are. We have discussed nearly two dozen theories, ranging from Sigmund Freud's work at the turn of the 20th century to contemporary developments in the 21st century. Because we have covered so many diverse approaches, you might be tempted to conclude that the field of personality is marked more by chaos than certainty, more by differences than agreements.

Which theory is correct? Which one solves the puzzle of personality? The most complete answer we can suggest is that each of the theories discusses factors that are influential, to some degree, in shaping our personality. Each theorist has contributed vital pieces to the puzzle. Now it is time to examine those pieces to try to see the whole picture, ending with consideration of the whole trait theory (WTT). The WTT brings together what we know contributes to personality.

We will summarize these diverse viewpoints in a brief and broad overview of the themes, or factors, that have emerged from the work of the various theorists:

1. The genetic factor
2. The environmental factor
3. The learning factor
4. The parental factor
5. The developmental factor
6. The consciousness factor
7. The unconscious factor
8. Whole trait theory

Evolutionary Theories of Personality

From an evolutionary perspective, personality can be understood as an adaptation. Adaptations are characteristics that helped our ancestors meet the challenges of their time and survive long enough in their environments to reproduce to pass along their genes and, largely as a result, those characteristics to us. Think back to the basics: Personality is a person's characteristic cognitive, emotional, and behavioral patterns that tend to be consistent across time and situations (i.e., are dispositions). As we have discussed in prior chapters (primarily Chapter 8), personality traits are heritable because they are in some part based in genetics passed down from biological parents (i.e., heredity). Heritability can be understood as the proportion of phenotypic variance that can be attributed to variance in genetic influence among individuals.

Phenotype describes the observable or manifest trait of a person or people. When it comes to personality, the phenotype includes the extent to which people are introverted versus extroverted, generous versus selfish, or have an internal versus external locus of control, as some examples. *Variance* means differences among people in something—here, phenotypic traits. Every trait emerges from a combination of genetic and environmental contributions. *Heritability* is an estimate of the portion of variance in personality associated with differences in people's genetics. Recall that twin studies are often employed to get heritability estimates: Researchers can measure people's personalities and assess the extent to which genetic relatedness predicts personality similarities. If monozygotic, or identical, twins are more similar to each other on extraversion than are dizygotic, or fraternal, twins, then we can infer that the trait is largely attributable to genetics, or heritability.

Notably, heritability estimates the genetic influence of a trait based on a population of people, rather than on a single or just a few people. It cannot be applied to just one person. It gives us information about the population from which the study sample comes. Accordingly, heritability estimates also depend on the relatedness (genetic variation) of the individuals within the sample.

The important thing to take away from this is that because personality traits are heritable, they have been shaped over time by natural selection.

Evolution by natural selection is the process by which the heritable traits of a population change over the course of generations. Traits that advantage individuals to better deal with the challenges of their environment and help them survive and reproduce get passed down via genes, whereas traits that disadvantage individuals in those contexts do not get passed down.

Consider this: If someone were mean, clumsy, lazy, unorganized, and irresponsible, would you want to work, share a dorm room, or have children with them? Probably not. Thus, especially in our evolutionary past where teamwork and sharing was integral to surviving weather and predators, the person with all of those traits would not be likely to survive or have as many children as someone who is kind, coordinated, hardworking, organized, and responsible. So the kind, coordinated, hardworking, organized, and responsible person passes down their genes, but the mean, clumsy, lazy, unorganized, and irresponsible person doesn't. Thus, the next generation has one more kind (etc.) and one fewer mean (etc.) person.

Over time and generations, the traits that offer advantages thus come to make up a larger percentage of the population's personality profile. Although we can all certainly think of someone who was unkind to us, most of the people around us day to day may be on the nicer side because kindness has been selected for.

Adaptations are evolved traits that solved problems and helped overcome challenges in our ancestors' environment. Selection pressures included environmental challenges like weather, terrain, and predators; access to survival resources such as food and water; as well as social and biological connections, such as cooperative social partners, friends, and romantic and sexual partners.

Humans' best adaptation to face all of these challenges is culture, which facilitates cooperation, shared resources, division of labor, safety, and access to the group's stock of knowledge (Baumeister et al., 2018). And as our evolutionary past nears the present, culture becomes a source of selection pressure too—some traits do better in some cultures than others, as we've discussed.

In the context of evolutionary theory, you may have heard the phrase "survival of the fittest." Often misconstrued, this phrase isn't necessarily talking about the strongest, biggest, most athletic person. Although those traits might have adaptive value in some contexts, **fitness** is a much broader concept, describing any adaptive trait or cluster of traits that helps people survive and reproduce. We can even extend the idea of fitness to traits that are adaptive insofar as they help our genetic relatives survive and reproduce—*inclusive fitness*. For example, throughout this textbook, we have learned that warm but firm parenting gives rise to adaptive traits in children. Thus, lovingness and firmness have inclusive fitness value because they help parents help their children do well in life.

Pause for Reflection

What personality traits do you think are adaptive and why?

Because human contexts and traits are so vast, so are subtheories of evolutionary psychology as they relate to personality. We can zoom in on a handful, though. We will discuss two groupings of personality theories. The first captures why we have the specific traits we have. The second set describes why there is variation in personality traits among people, or put another way, why people are low, medium, or high in personality traits. Many of these theories focus on the Big Five: extraversion, agreeableness, conscientiousness, openness to experience, and neuroticism (or its opposite end, emotional stability). But a few go very far beyond the five-factor model traits.

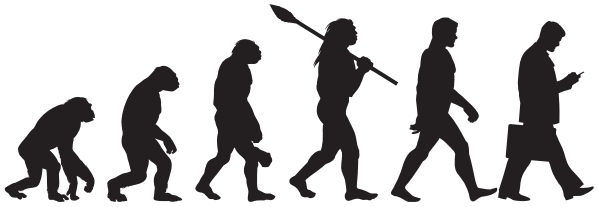
evolution by natural selection The process by which the heritable traits of a population change over the course of generations, in which traits that benefit survival and reproduction are passed down.

adaptations Evolved traits that solved problems and helped overcome challenges in our ancestors' environment.

fitness Having traits that facilitate survival and reproduction.

Emergence of Traits

Why are our personalities made up of the specific traits we have? Why not other traits? Evolutionary theories of personality help us understand why the traits that have emerged via scientific study and in driving our



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Understanding how environmental and social pressures over evolutionary time shaped what's adaptive helps us understand personality traits.

behavior did in fact emerge, including theories about primal emotional systems, individual success, romantic and sexual partner choice, and social partner choice.

Primal Emotional Systems

Some scholars argue that our personality traits come from primal emotional circuits (Montag & Panksepp, 2017). Primal emotions, or those having existed in much earlier human ancestors, are thought to be one of the oldest parts of what drove our cognition and behavior, especially as a result of the reinforcement our own feelings give us. Theorists suggest that there are seven **primal emotions** that give rise to our personalities. These primal emotions emerge from activation of "feeling" regions of our brains that have been evolved for a long time. Four are emotional patterns for positive emotions:

1. Seeking
2. Lust
3. Care
4. Play

Three emotional patterns provide the foundation for negative emotions:

1. Fear
2. Anger
3. Sadness

These primal emotions combine in a multitude of ways, and specific combinations give rise to specific personality traits of the Big Five. Extraversion emerges from strong play. Agreeableness comes from high care and low anger. Openness to experience correlates with seeking. Neuroticism results from high levels of all the negative emotions. Conscientiousness, however, may be an evolutionarily newer personality trait that relies on more evolved and complex brain circuitries that can reason and plan, like the prefrontal cortex. The connections between these primal emotions and personality have been observed relatively consistently across cultures (e.g., in the United States, Germany, and China), genders, and age groups (Montag & Panksepp, 2017).

For example, in a study of Chinese and German adults, researchers found that the negative emotions of fear, anger, and sadness were associated with attempts to cope with anxiety (Jung et al., 2022). Fear was associated with less vigilance coping and more avoidance coping.

Other work has examined how the primal emotions relate to personality disorders as classified by the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) (Karterud et al., 2016). That work found that lower anger and sadness and more seeking were related to borderline personality disorder, which features destructive and/or distressing long-term patterns of instability in emotions and social relationships. Low sadness and high anger as well as seeking were linked with dependent personality disorder. Dependent personality disorder is characterized by long-term patterns of relying on another person or people to an extreme extent in making life decisions and at the cost of one's own personal needs due to a deep lack of self-confidence or self-dependence. Researchers have even linked agreeableness and extraversion in concert with care and play to spirituality and well-being, indicated in a study with Austrian adults (Hiebler-Ragger et al., 2018).

Pause for Reflection

Which primal emotions do you think you're highest in? How do they contribute to your personality?

Success of the Individual

One of the primary reasons why human beings' personalities fall into the patterns they do has to do with what has been adaptive over our evolutionary history. Personality traits are functional, with patterns of thoughts, feelings, and behaviors that have fitness benefits (MacDonald, 1995). **Success of the individual**

primal emotions Evolutionarily old positive (seeking, lust, care, play) and negative (fear, anger, sadness) feelings that are theorized to give rise to the five factors of personality.

success of the individual One reason why over evolutionary time the specific traits that dominate our personality profiles emerged; those traits helped individuals survive and reproduce.

is one reason why over evolutionary time the specific traits that dominate our personality profiles emerged.

Let's consider the five-factor model traits. Extraversion is thought to have motivated people's pursuit of adaptive goals and rewards, especially as they relate to romantic/sexual and social partner seeking. By seeking and gaining sexual and social partners, high extraversion conferred both survival and reproductive benefits. Extraversion is also associated with social dominance, a way by which to seek and attain social status and power over other people. Individuals who had power would have had more access to all sorts of survival resources, including food, water, and teamwork. Indeed, extraversion is associated with higher educational attainment, annual income, and life outcome satisfaction in modern times, as evidenced in a study of almost 5,300 adults in Sweden (Kajonius & Carlander, 2017). When it comes to reproductive success, research in Serbia found that extraversion was associated with beginning to have children younger in life, when people tend to have an easier time with pregnancy (Međedović et al., 2018).

Agreeableness is characterized by niceness and cooperative tendencies, and therefore confers benefits for creating and maintaining interpersonal relationships and cooperation. People high in agreeableness tend to share their resources and help others. In return, others may be more likely to share their resources with the agreeable person or to protect them from danger. Think about inclusive fitness. Agreeableness is very helpful for raising children who may not be able to contribute resources at as high of levels as adults. In that same study of Swedish adults, agreeableness was associated with higher educational attainment and life outcome satisfaction (Kajonius & Carlander, 2017). Agreeableness has also a been linked with men's having more children (Međedović et al., 2018).

Conscientiousness pushes people to be organized, planful, and persistent. Keeping track of what survival resources one and one's relatives have and will need as well as where and how best to get them is extremely important. Someone high in conscientiousness may be particularly well-suited to performing those tasks. Conscientiousness also provides fitness advantages in that it predicts persistence on tasks and willingness to delay gratification to get bigger survival rewards, such as more water or food, a better home structure, or better plans for the group's division of labor. People high in conscientiousness also tend to be more sensitive to punishment and to follow rules, which supports the individual's safety from retribution or punishment. Across time and in the modern context, conscientiousness is associated with healthy behaviors and therefore better health, physically and mentally, and with longevity (e.g., Yoneda et al., 2023) and life outcome satisfaction (Kajonius & Carlander, 2017). Conscientiousness has also been linked to having more genetic offspring, including number of grandchildren (Međedović et al., 2018).

Openness to experience is associated with exploration, trying new things, and building culture. People high in openness to experience may have been more likely to seek out and find survival resources like food, water, and building and tool materials. Openness also goes hand-in-hand with creativity, which is essential for trying to solve problems in new ways and gaining new knowledge. Creativity, for example, might have helped one make the most of a little food by trying to cook it or combine it with other foods in different ways. Like extraversion, openness to experience positively predicted people's higher educational attainment, annual income, and life outcome satisfaction (Kajonius & Carlander, 2017).

Neuroticism entails strong sensitivity to potential threats, and thus has served as a sort of alarm system for individuals over evolutionary time. Neuroticism is associated with identifying and reacting to dangers quickly; this is essential when one's tribe might be in tiger territory or competing with others for scant survival resources. People high in neuroticism tend to experience a lot of worry and anxiety, which can catalyze preparation for potential pitfalls like running out of food or not being well protected enough. Thus, the individuals high in neuroticism might have avoided dangers, injury, and illness more, and as a result, live longer. Neuroticism has been linked to higher annual income (Kajonius & Carlander, 2017). Higher neuroticism is also

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Certain traits emerged because they support the survival and reproduction of the individual and of romantic/sexual partners and social partners.

associated with reproductive success, that is, having more children (Međedović et al., 2018).

What about antisocial traits like the Dark Triad—psychopathy, narcissism, and Machiavellianism—why do these traits exist? Although a small proportion of the population scores very high on these traits, they still must confer some benefits, right? Yes and no. There could be just a little benefit, but these traits might be maintained through mechanisms we discuss in following sections—assortative mating and frequency dependence. So let's discuss the little benefit. In a sample of German adults, researchers found that higher narcissism was associated with higher salary and Machiavellianism was associated with leadership position and career satisfaction; however, narcissism was negatively related to those good occupation outcomes (Spurk et al., 2016).

Pause for Reflection

What might a culture do to select for more prosocial and fewer antisocial traits?

Romantic and Sexual Partner Choice

Traits don't just matter for the individual; they also matter for the romantic and sexual partner of a person. **Romantic and sexual partner choice** is thus another reason why the traits we have emerged; specific clusters of thoughts, feelings, and behaviors help our partners' genes into the next generation. A romantic partner's traits can be better or worse for their partner. Traits that facilitate the garnering of survival resources, whether food, water, or safety, or social resources, such as prestige, power, and cooperative relationships, will be attractive in potential partners. Sexual partners who can biologically reproduce also have to consider the inclusive fitness of their partner's traits for their children, who will inherit those traits. Most of the benefits to the individual of the traits discussed in the previous section can be applied to benefiting one's children and therefore are important in one's mate.

Given the value of, for example, the Big Five, we should be able to discern those traits in others because they tell a person's mate value (Ellis et al., 2002). Research with nearly 4,500 Australian adults found that for men and women, the more extraverted people were, the more frequently they had sex (Whyte et al., 2019). Other work with adults and undergraduate students in Canada similarly found that extraversion was associated with more sexual partners (Arnocky et al., 2017).

For men, in addition to higher extraversion, higher levels of agreeableness and conscientiousness and lower neuroticism were also associated with more sex (Whyte et al., 2019). Higher extraversion and lower openness to experience was associated with having more children for men, whereas only agreeableness was associated with higher number of children for women. Further analysis found that specific combinations of traits in men were associated with more reproductive success—high levels of extraversion/agreeableness, extraversion/conscientiousness, agreeableness/conscientiousness (Whyte et al., 2019).

Consider agreeableness, which is important in mate value. We would all likely prefer to have a romantic partner that is kind, giving, and easy to cooperate with. If our partner has very low levels of agreeableness, there is risk for becoming a victim of neglectful, selfish, and abusive behavior from them (Buss, 1991). Beyond that even, most people prefer morally good, or altruistic and giving, people (e.g., Arnocky et al., 2017). Men who report more altruistic personalities and who donated more money in a lab study also reported more romantic and sexual partners.

What about the Dark Triad? Why would these be selected for? Narcissism is linked to prioritizing physical attractiveness and masculinity, such that researchers have found that some women are more attracted to faces of men high in narcissism. Furthermore, women who tend to be attracted to men high in narcissism were found to have more children than other women, when their age, sexual openness, and health were taken into account (Marcinkowska et al., 2016). Thus, as for the individual, traits matter for the individual's partner. Accordingly, people tend to prefer certain personality traits in their romantical and sexual partners.

Pause for Reflection

What three personality traits do you think are most important in a romantic partner? Why?

Social Partner Choice

As with romantic partners, an individual's traits are important for their social partners across many domains—friends, team members, cooperators, bosses,

romantic and sexual partner choice Selection pressure over evolutionary time that contributed to why the specific traits that dominate our personality profiles emerged; those traits helped romantic and sexual partners survive and reproduce.

subordinates, and others. Thus, people must decipher the traits of their social partners because they affect access to survival resources, such that **social partner choice** has selected for the specific trait clusters we have today. Generally, we want social partners who are somewhat extraverted, very agreeable, very conscientious, somewhat open, and not very neurotic. Of course, the traits we select for in others depends largely on their role. In short, "Individuals who could accurately assess their group members' general dispositions would make better social decisions. Their discernment would help them choose even-handed leaders, loyal mates, and trustworthy friends" (Maranges & Reynolds, 2020).

Theorists have suggested that there are adaptive combinations of traits for social roles when it comes to teamwork and group dynamics (e.g., Hogan, 1995). Groups that worked better together over time did better as a group and as individuals in terms of success and survival. Different personality traits make people good fits for different roles.

Low neuroticism is important for people who have to make important decisions, given that under pressure, people high in neuroticism make less rational and effective decisions (e.g., Byrne et al., 2015). Group members are more likely to reject people who evince selfish behavior, finding it to be just as or more important than incompetence when deciding whether to trust and include a person on one's team (van der Lee et al., 2017).

In research with Tsimane forager-horticulturalists—Indigenous people of Bolivia who forage and farm plants for their food—psychological, demographic, and physical traits tended to cluster in people who earned and were selected as leaders . They were gregarious, cooperative, interpersonally warm, and physically strong and pursued formal education and leadership positions (von Rueden et al., 2015). In longitudinal data with that population, the benefits of group dynamics are evident, and there is social selection for status: Higher-status people get more cooperative partners over time, and people get more status over time by cooperating with those of higher status than themselves (von Rueden et al., 2019).

What group members might like their social partners to be high in the Dark Triad traits? Perhaps unsurprisingly, the answer is people high in the Dark Triad. Specifically, in research with over 900 undergraduate American students, individuals higher in psychopathy, narcissism, and Machiavellianism reported preferences for others in diverse social roles, such as lawyer, musicians, and teachers, to be high in psychopathy, narcissism, and Machiavellianism (Kay & Saucier, 2020).

Across the social domains, personality evolved as a way to assess clusters of emotions, thoughts, and tendencies that cohere in ways that predict behavior that mattered for our ancestors' and our own survival. We have even evolved preferences for faces that we learn relay certain traits, including agreeableness and extraversion (Sacco & Brown, 2018a, 2018b). Our social goals shape what we're attuned to in perceiving faces: People who want more social connection have a particular preference for people whose faces relay higher extraversion (Sacco & Brown, 2018b).

Pause for Reflection

What personality traits do you think are most important for a coworker? For an athletic team teammate? For a friend?

Variation in Traits

So far we have learned about evolutionary theories of personality that help us understand why there are specific personality traits. In this section, we discuss evolutionary theories of personality that describe why there is *variation* in personality traits, or why some people are low in a trait, some people are high, and most people are somewhere in the middle level of that trait. We will discuss assortative mating, trade-offs, frequency dependence, biological sex differences, and environmental selection.

Assortative Mating

Assortative mating occurs when people have children with others who are similar to them in traits. On average, highly extraverted people seek out romantic relationships with and have children with highly extraverted people; the same goes for people with middling extraversion and for people with high introversion (or low extraversion).

social partner choice A reason why over evolutionary time the specific traits that dominate our personality profiles emerged; those traits helped social partners (e.g., friends, teammates) survive and reproduce.

assortative mating When people who are similar to each other in personality have children together, thereby maintaining variation in personality traits across people.

The way by which this pattern evolved has to do with inclusive fitness. Recall inclusive fitness, whereby traits we have help the survival and reproduction of genetic relatives. By having biological children with people who are similar to ourselves, we are increasing the likelihood that our children will have our same genes (although from different lineages) that give rise to the traits we share with our partner. Think "birds of the same feather flock together."

Assortative mating maintains variation in personality traits. If people did not assortatively mate, and a person with a score of 2 in extraversion had a child with a person who was a 7 in extraversion, the child would likely score in the middle of the extraversion scale. In contrast, imagine a couple who assortatively mates: One person has a 6 and the other has a 7 score on extraversion, and they have a child together. That child will likely be a 6–7 in extraversion. Somone high in introversion with a score of 2 on extraversion, on the other hand, will likely be attracted to and have a child with another person, with a score of 1 on extraversion. Their child is likely to be very low on extraversion as well. Thus, assortative mating leads to more people in the next generation across the levels of a trait. For example, research in Spain demonstrates that assortative mating occurs for all the Big Five traits, and most strongly for agreeableness, conscientiousness, and openness to experience (Escorial & Martin-Buro, 2012).

Assortative mating has also been found to influence political orientation (Kandler et al., 2012), intelligence (Escorial & Martin-Buro, 2012), and emotional intelligence (Śmieja & Stolarski, 2018) around the world.

This process is especially important for maintaining high and low scores that might otherwise be somewhat maladaptive—imagine a person so high in extraversion that they take a lot of risks and shirk responsibilities to socialize. This may be maladaptive but might still be passed down to the next generation if that person finds and has children with another 7 on extraversion.

Maladaptive traits linked to depression and relational problems tend to be similar in newlywed married couples; that is, people with high levels of depression tend to marry people with high levels of depression, as evidenced in research with American couples (Trombello et al., 2015). Similarly, in research in Hungary, all levels of Machiavellianism are maintained by assortative mating (Ináncsi et al, 2016).

Research with Americans and Brazilians has found that people even expect others to assortatively mate across traits, including physical attractiveness, social skills, and social status (Castro et al., 2018, 2021).

Pause for Reflection

Why do you think people are attracted to others that have similar traits to them?

Trade-Offs

As you have likely noticed in studying personality, there are costs and benefits to all traits—**personality trade-offs** (Penke et al., 2007). Extraversion is not adaptive in all situations, and neither is introversion. Instead, middling levels are adaptive in most situations, and high extraversion and high introversion are very adaptive in some specific situations.

Differing environments and contexts select for differing levels, maintaining genetic and therefore trait variation in the population by selecting high and low levels of the trait, known as **balancing selection**. Different levels of a trait can be favored differently across space, time, and situations.

Let's consider the costs and benefits of the Big Five personality traits for ourselves and our ancestors (Nettle, 2006). Extraversion is valuable for building social relationships, wooing romantic and sexual partners, and exploring new environments. When it comes to relationships, though, extraversion is associated with higher likelihood of infidelity or leaving one relationship for another. Extraversion is also predictive of risk-taking and sensation-seeking behaviors, which increase the likelihood of injury, arrest, and mortality.

People high in agreeableness tend to cultivate positive social and romantic relationships by being supportive and caring. However, high agreeableness can make people more vulnerable to be taken advantage of, given the importance of advocating for yourself across situations and standing up for yourself against aggression.

Conscientious people are organized and planful, and follow through in accomplishing their goals. As a result, they perform better than people low in conscientiousness in their jobs, organizations, and school, and they tend to engage in healthier behaviors and have better health. However, the cluster of

personality trade-offs Costs and benefits of specific traits, which largely depend on the environment.

balancing selection Leads to variation in personality traits in a population because the traits have trade-offs, costs, and benefits depending on the environment.

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Evolutionary theories of personality help explain why people vary so widely in their personality profiles.

traits that covaries with extremely high conscientiousness is associated with obsessive-compulsive personality disorder and eating disorders such as anorexia (Nettle, 2006).

People high in openness to experience tend to seek out and enjoy new experiences, such as travel, food, and aesthetic outlets like the arts. High openness is also linked with creativity and novel ways of problem solving. However, at very high levels of openness, people become vulnerable to strange ways of thinking, believing unevidenced things about the world, and even schizophrenia (Nettle 2006).

As we have discussed in prior sections, neuroticism is valuable in facilitating threat-detection, with anxiety and worry leading to more preparation to accomplish goals. However, the negative affect, anxiety, and depression that tend to be higher in neurotic individuals are distressing and undermine health, the ability to accomplish goals over time, and social relationship functioning (Nettle, 2006). For example, in a study of over 1,000 students from 3rd to 9th grade in the United States, children who engaged in rumination (i.e., obsessing about something, often negative, in thoughts and conversation, that interferes with other mental processes) with their friends (i.e., co-rumination) gained some benefits for the relationship closeness but also experienced more depressive and anxiety symptoms (Rose et al., 2007).

Pause for Reflection

Are there other costs and benefits to personality traits not noted here?

Frequency-Dependence

Another theory that helps us understand why there is variation in personality across people is the theory of frequency dependence. **Frequency-dependent selection** occurs when the presence of certain levels of a trait within the environment dictates how advantageous or disadvantageous the trait is (Smith, 1998; Maranges & Reynolds, 2020).

Especially for those tied to antisociality, some traits are valuable at high levels when they are rare. Think about the Dark Triad. Why is there variability in psychopathy, such that there are some people so high they can be considered psychopaths? Psychopathy features selfishness, impulsivity, shallow social skills, and a lack of social emotions (e.g., shame, guilt, empathy). Psychopathy is "adaptive" only in the sense that it might make it more likely for people to have more resources or children by engaging in unfair or cheating strategies. For example, psychopaths engage in more lying and blaming others to do better at work, increasing their resources, and engage in more short-term sexual relationships and have more sexual partners than others, increasing their reproductive fitness. But this cheater strategy only works if people allow themselves to be taken advantage of (Mealey, 1995). And that depends on how many other people are cheating.

The more people who engage in selfish, cheating strategies, the fewer people to be taken advantage of, and the more likely that the non-cheaters will realize that cheaters exist and thus become vigilant to them. In a study of teamwork and cooperation with undergraduates in Japan, individuals high in risk taking were strategically cooperative or selfish depending on who else was in their group (Kim et al., 2019). Thus, the environment interacts with levels of psychopathy to dictate whether that trait is adaptive (Ene et al., 2022). Researchers have even found that the genes and traits of siblings shape each other's traits (e.g., Rauscher et al., 2015).

Pause for Reflection

Do you think there are positive traits that are also frequency dependent in their adaptiveness?

Biological Sex Differences

Biological sex created unique challenges for females and males across evolutionary time, which gave rise to differing adaptive patterns of personality (MacDonald, 1995). Most people, including our ancestors, have the biological sex of female (XX chromosomes) or of male (XY chromosomes). Note that sex is different than

frequency-dependent selection When the prevalence of the trait within the immediate social environment shapes how advantageous or disadvantageous the trait is.

gender. To have a child, female biology requires a much higher investment than male biology. Both parents must engage in sex to reproduce, but the female parent carries the child in pregnancy, delivers the child in childbirth, and provides nutrients via lactation. Although human males are relatively high in investment in their children via childcare relative to other animals, female parents usually invest the same or more on top of their higher reproductive investment. Moreover, this model of biparental care, where males invest highly and directly in children with one female, is a relatively modern phenomenon.

The better that mothers were at carrying and caring for their newborns and growing children, the more likely they were to have children that thrived, more children, and more of their genes in the next generation. What traits facilitated better outcomes for children over time? Traits that revolve around caring and being careful: higher levels of nurturance, warmth, openness to feeling, agreeableness, conscientiousness, and neuroticism, in which females tend to be higher than males across cultures (Costa et al., 2001).

In ancestral societies, it was acceptable for males to have children with multiple women, and males supported their families by provisioning survival resources and safety. The more food and water and prestige, the better for their children and genes. Thus, males evolved to be higher in dominance, risk taking, and sensation seeking relative to females on average across cultures (Costa et al., 2001).

Those results have been replicated in a sample of over 320,000 American adults (Kajonius & Johnson, 2018): Females scored higher than males in agreeableness and neuroticism. When it came to facets of personality, females were higher in anxiety, vulnerability, openness to emotions, altruism, and sympathy; males were higher in facet traits of excitement-seeking and openness to intellect. Other work suggests that these adult sex differences start to take shape in adolescents, when sexual maturity tends to be reached, as evidenced by a study of nearly 5,000 adolescents from 23 cultures (De Bolle et al., 2015). Research with nearly 1,000 twin pairs found that females were higher than males in agreeableness, conscientiousness, and neuroticism on average, but they were not any more or less affected by genes or the environment than males (South et al., 2018).

Pause for Reflection

Given that many of the evolutionary pressures in which our ancestors evolved no longer affect us to the same extent, how might culture try to maintain these differences? How is this problematic?

Environmental Selection

Another set of theories helps us understand variation in personality by understanding how various factors in the environment differentially shape personality. We touched on this in prior sections, in discussing balancing selection, but here we take a deeper dive.

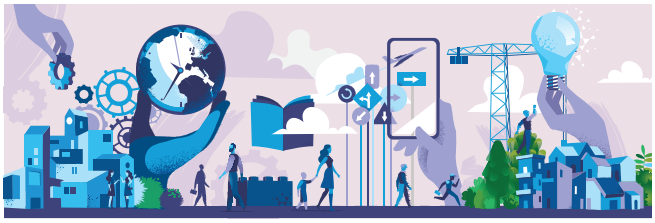
Environmental Niche Specialization

An **environmental niche** is an organism's immediate ecological context. Environmental niches dictate which traits, including personality, are most adaptive.

In some cases, the environment selects for narrowed variation in traits. For example, small islands provide a specific niche by limiting the number of new places that can be explored, diverse occupational opportunities that can be pursued, and the number of people with whom one can become friends or romantic partners. Thus, people with some traits should prefer and excel more in that context than others. Indeed, research has found that people whose families have lived on three small islands off the coast of Italy are lower in extraversion and openness to experience than people who live on the mainland and people who recently moved there (Camperio Ciani et al., 2007).

In other cases, the environment provides smaller niches that differentially favor a multitude of traits or levels of traits. As cultures become more complex, so do the social role niches which they provide, leading to more diversification of personality profiles (Lukasewski et al., 2017; Montiglio et al., 2013). Even in our evolutionary past, cultures with more specialization opportunities such as fishing, hunting, farming, building, foraging, caring, entertaining, and keeping records all require different personality profiles for the best results. Farmers need to be patient, persistent, detail oriented, and strong, whereas hunters might need to be risk-taking and strong. Caretakers need to be conscientious, agreeable, and low in risk taking, whereas entertainers will do better if they are open-minded, creative, and extraverted. In an analysis of data from 55 nations (in North and South America; northern, southern, and eastern Europe; the Middle East; Africa; south, southeast, and east Asia; and Australia/Oceania) and nearly 18,000 people, researchers demonstrate that the Big Five personality traits combine in more complex ways in more complex societies (i.e., with more economic development,

environmental niche An organism's immediate ecology, which shapes the adaptive value of personality traits.



Hurca/Shutterstock.com

The ecological niche specialization theory posits that the more complex a society is, the more specialized roles it has to fill, and therefore, the more adaptive different personality profiles can be.

urbanization, and sectoral diversity) than in less complex societies. Work employing computational modeling has replicated these effects (Smaldino et al., 2019).

Others have argued that the Dark Triad evolved in literally dark contexts: "the nocturnal cognitive niche hypothesis suggests that the Dark Triad was advantageous in a nocturnal niche because it enables exploitative strategies and would be linked with an evening-oriented chronotype" (Costa Porfírio & Corrêa Varella, 2022). Some research supports this idea in the United States and Brazil. For example, people higher in Machiavellianism and psychopathy tended to be awake at night and in darker hours than people lower in those traits (Costa Porfírio & Corrêa Varella, 2022).

Pause for Reflection

In what type of ecology do you think your traits are adaptive? Have you found a niche that fits your personality well?

Life History Theory and Behavioral Ecology

Life history theory originated in evolutionary biology to help explain variation in traits, mostly related to developmental and reproductive patterns across the life span, in different species of animals. The fundamentals of this theory lie in a few basic facts: Organisms, including humans, have limited time and biological energy, face various levels of environmental challenge, and must make trade-offs linked to that limited energy and environmental challenge (Belsky et al., 2012).

If we have limited energy but are driven to optimize the survival and reproduction of our genes, we cannot invest in all the ways to reach that goal. We must make trade-offs: We can have many children but not invest time and resources in them all very heavily, or we can have one child in whom we invest all our time and energy. Compared to other species, humans and other animals like elephants have relatively few children and invest a lot in each of them, with long pregnancies and extended childhoods during which the children require care. In contrast, salmon release thousands of eggs in the river, investing no more energy or time into their care or protection. Elephants, compared to other animals, display a *slow life history (k) strategy*, whereby they invest heavily in maintaining their bodily strength (i.e., somatic effort) and in their children (i.e., parental effort). Salmon exemplify a *fast life history (r)strategy*, which features low investment in their bodies and children and high investment in attracting mates (i.e., mating effort) and reproducing many children (i.e., reproductive effort), to increase the likelihood of having more children and therefore passing on their genes (Figueredo et al., 2005). These reproductive traits as well as the personality traits and individual differences that covary with them tend to be highly heritable, or due to genetics. One heritability estimate is that 65 percent of the variation among individuals in life history traits can be attributed to genetic influence (Figueredo et al., 2004), suggesting these traits have been selected for in our ancestors (Figueredo & Rushton, 2009).

Differences in strategies have resulted from environmental pressures on those species' ancestors over evolutionary time. The harsher and more unpredictable the physical environment, the less time and resources the animals have to slowly reproduce and invest heavily in offspring. Harshness denotes high levels of mortality (death) or morbidity (illness, injury) risk and can emerge from a lack of survival resources, the presence of predators, or dangerous weather patterns. Unpredictability is random changes in the harshness. Accordingly, higher levels of harshness and unpredictability are associated with faster life history strategies (r-selected), whereas lower levels of harshness and unpredictability are associated with slower life history strategies (k-selected) (e.g., Brumbach et al., 2009; Belsky et al., 2012; Ellis et al., 2009; Maranges et al., 2022). Pathogen (e.g., germs or viruses that make you sick) threat can also shape life history strategies. For example, during the COVID-19 pandemic, people who lived in Wuhan, the initial epicenter of the pandemic, reported faster life history strategies than people in another Chinese city less affected by the virus (i.e., Chongqing; Li & Cao, 2021).

This fast–slow continuum has been adapted and applied to humans to understand within-species differences in reproductive traits. In humans, these

life history theory Posits that variation in reproductive and related traits result from adaptive calibration to environmental challenges and because organisms have limited resources and must make trade-offs.

environmental pressures over time also combine with the trade-offs we must face to shape broader traits that relate to survival. A literature in psychology inspired by life history theory—**behavioral ecology**—applies an adaptive calibration framework to understand variation in a broad array of personality traits in people, including planning, antisociality and prosociality, and personality.

A few important notes before we review research on life history theory: Humans have largely weakened the environmental pressures of harshness and unpredictability in our physical environment with cultural evolution, for example, strong physical structures, welfare, and medicine. Accordingly, the nature of harshness and unpredictability is a different for most modern humans (especially in industrialized countries) compared to for ancestral humans. Survival resources that keep us healthy and well are tied to financial wealth and belongings. Unpredictability can characterize our physical environment but also can be impactful in the household, family, and social environment. Researchers have extended the investigation of exposure to harshness and unpredictability to that of individuals' own life spans, versus evolutionary history. In particular, theory and research suggest that individuals' development will be shaped most by exposure to harshness and unpredictability in young childhood, usually before the age of 5 or 10 (e.g., Belsky et al., 2012; Brumbach et al., 2009; Ellis et al., 2009; Simpson et al., 2012). Refer to Table 15.1 for an example of a measure of harshness and a measure of unpredictability (Maranges et al., 2022).

Reproductive Traits Fast life history strategies are characterized by earlier age of sexual puberty, more sexual partners, earlier age of first child's birth, and more children (e.g., Figueredo et al., 2004). Both harshness and unpredictability in childhood predict adults' being younger when they first have sex and have their first child; harshness and unpredictability also predict having more sexual partners (Maranges et al., 2022). Female individuals who experienced more, versus less, harshness also tended to be younger when they experienced sexual puberty. High unpredictability also predicted adults' having more children. Childhood harshness predicts more openness to casual sex (Patch & Figueredo, 2017). Similarly, childhood unpredictability was associated with intentions to engage in unprotected sex (French et al., 2020). Using longitudinal data from a study of Australian children as they develop, researchers found that children who experienced objectively harsh and unpredictable environments at 6 to 7 years old engaged in more sexual activity and risk taking in adolescence (Maranges & Strickhouser, 2021). Additionally, adolescents whose childhoods were highly harsh had more and earlier romantic relationships.

Health Life history and environmental pressures have been tied to other measures of physical and mental health. Specifically, slow life history is found to be associated with relatively better physical and mental health compared to fast life history (Figueredo et al., 2004; Figueredo & Rushton, 2009). Other work has found that people with faster, versus slower, life histories experience much more negative psychopathology, including depression, anger, anxiety, mania, somatic symptoms, suicidal ideation, psychosis, sleep disturbances, memory problems, repetitive thoughts and behaviors, dissociation, personality dysfunction, and substance use (Hurst & Kavanagh, 2017). Both childhood unpredictability and harshness predict externalizing problems, including disinhibition, callous aggression, and substance use, as well as lower emotional stability and higher depressive symptoms in adulthood (Doom et al., 2016; Martinez et al., 2022; for theory, refer to Del Giudice, 2016). Harsher early life experiences are associated with more rumination and suicidal ideation (Valderrama et al., 2020).

Harsher and more unpredictable childhood environments have been tied to adults' experiencing inflammation and higher white blood cell count (Geng et al., 2021). People with slower life history strategies tend to engage in more health behaviors than people with faster life history strategies, which may help explain these findings (e.g., Corpuz et al., 2020).

Cognitive Tendencies When individuals have faster life history strategies or experienced high harshness and unpredictability in their childhoods, they tend to exhibit a cluster of cognitive tendencies that facilitate extraction of resources from the environment in the present, but at the cost of resources in the future. Such a focus on the present and cognitive flexibility in the now is adaptive for someone whose environment is harsh and unpredictable.

Unpredictable and harsh childhoods have been tied to worse performance in a cognitive inhibition task (i.e., overriding dominant response) but better performance at task switching (Mittal et al., 2015). People

behavioral ecology The field of study that focuses on how features of the environment shape personality.

Table 15.1 Example Measures of Perceived Childhood Harshness and Unpredictability

Think back to your life when you were younger than 10. This time includes preschool, kindergarten, and the first few years of elementary school. Rate the extent to which you agree with each of the following statements on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Harshness
1. Despite how much my parents worked, my family rarely had enough money for luxury items.
2. My family rarely had enough money to go out for a nice dinner.
3. Growing up, I rarely got spoiled because money was so tight.
4. My family was strained financially.
5. I felt uncomfortable asking my parents for money because money was tight.
6. We had to try to save money when shopping for anything.
7. I never had the newest style of shoes or clothes.
8. My family and I were usually able to purchase expensive presents for holidays, birthdays, etc.*
9. I felt relatively wealthy compared with other kids in my school.*
10. I grew up in a relatively wealthy neighborhood.*
11. My family usually had enough money for things when I was growing up.*
**reverse coded*
Unpredictability
1. I never knew whether my parents would be there to pick me up from school.
2. When I woke up, I often didn't know what could happen in my house that day.
3. My family life was generally inconsistent and unpredictable from day-to-day.
4. When I left my house I was never quite certain what would happen in my neighborhood.
5. Things were often chaotic in my house.
6. I did not know what to expect from my family when I had friends over.
7. My family environment was often tense and on edge.
8. I did not know when I would see my parent(s).
9. I could not predict which of many caretakers (e.g., babysitters, nannies, neighbors, family) would be watching me.
10. I was never certain where it was safe to play.
11. The traffic around the house(s) I lived was unpredictable and chaotic.
12. People often moved in and out of my house fairly frequently.
13. I often did not know what to expect from other students at school.
14. I had a hard time knowing what my parent(s) or other people in my house were going to say.
15. My family had a consistent schedule, so I knew what to expect each day.

Source: Maranges, H. M., Hasty, C. R., Martinez, J. L., & Maner, J. K. (2022). Adaptive calibration in early development: Brief measures of perceived childhood harshness and unpredictability. *Adaptive Human Behavior and Physiology, 8*(3), 313–343.

with relatively slow life histories tend to be higher in cognitive control than those with relatively faster life histories (Figueredo et al., 2018). They also tend to engage in more future-oriented cognitions, such as more consideration of future consequences and planning and less risk taking (e.g., Figueredo et al., 2007; Figueredo et al., 2005; Griskevicius et al., 2011; Mittal & Griskevicius, 2014).

Exposure to high levels of unpredictability in childhood is associated with stronger delay discounting (opting for immediate rewards at the cost of larger future rewards) in adulthood (Martinez et al., 2022). Across a variety of economic tasks, people whose childhoods were harsher tended to be more impulsive, take more risks, and approach temptations more quickly (Griskevicius et al., 2013).

Poorer performance may have to do with self-confidence rather than actual differences in ability. Indeed, research finds that people who experienced a harsher childhood environment expect worse luck and lack self-confidence, which then feeds into performance when making decisions under threat (Mittal et al., 2020).

Antisociality and Prosociality Fast life histories and higher levels of harshness and unpredictability encourage antisociality, whereas slow life histories and lower levels of harshness and unpredictability encourage prosociality. People with relatively slow life histories tend to score higher in cooperative tendencies, altruism, investing in other people, obedience to social rules, and social intelligence, and lower in psychopathy and Machiavellianism compared to people with relatively faster life histories (Figueredo et al., 2005, 2007, 2009, 2018). Slower life history strategies have also been linked to higher moral considerations captured in the moral foundation framework: care, fairness, loyalty, authority, and purity (Gladden & Cleator, 2017).

In relationships, people with faster life histories tend to be more likely to engage in casual sex and to be emotionally distant from, and willing to coerce into sex, their partners (Figueredo et al., 2005; Gladden et al., 2008). Faster life history strategies have also been linked to higher likelihood of intimate partner violence and interpersonal aggression across cultures, including the United States, Australia, Italy, Mexico, and Singapore (Figueredo et al., 2018; Szepsenwol et al., 2019).

Experiencing more harshness and unpredictability as children was associated with Chinese adults' faster life history strategies and higher levels of each of the Dark Triad traits (Geng et al., 2021). Similar results emerge for adults in the United States (Jonason et al., 2016, 2017; Patch & Figueredo, 2017). Another study in China found that the more childhood unpredictability people experienced, the less securely attached they were to close others, and in turn, the more greedy they were (Chen, 2018). Such greed may be associated with exploitation of others. Indeed, other research has found that the more harsh and unpredictable their early environments, the more exploitative and retaliatory men were in resource exchange activities with others (McCullough et al., 2013).

In a study of nearly 3,000 adolescents in high school, the more unpredictable individuals' early life experiences, the less they engaged in prosocial behavior (i.e., self-reported behaviors and observed sharing of resources) and the lower they scored in honesty, humility, and trust in others (Wu et al., 2020). When it comes to moral decision making, people who experienced more harshness and unpredictability made more selfish and fewer prosocial decisions (Zhu et al., 2019). Adding nuance to this, across six studies, researchers found that higher childhood unpredictability, but not harshness, was associated with American adults' lower moral concern about harming others and about helping others in moral dilemmas (Maranges et al., 2021). Furthermore, these researchers found that this pattern was due in part to people who experienced higher levels of childhood unpredictability engaging in less empathy and investing less in other people.

Personality Traits Personality traits such as the Big Five vary with life history strategies and exposure to harshness and unpredictability (Chen et al., 2017; Maranges & Reynolds, 2020; Maranges et al., 2022). People who have slower life history strategies tend to be higher in extraversion, agreeableness, conscientiousness, and openness to experience and lower in neuroticism. In contrast, people who evince faster life history strategies tend to be lower in extraversion, agreeableness, conscientiousness, and openness to experience, and higher in neuroticism. These traits not only covary with life history strategy, but they are also genetically correlated, suggesting that they co-evolved, as evidenced in an analysis of twin pairs' data (Figueredo & Rushton, 2009).

People who experienced higher levels of harshness as a child tend to be higher in impulsivity, neuroticism, and the perception that external constraints undermine their agency and autonomy in controlling their lives, but lower in extraversion, agreeableness, conscientiousness, and openness to experience (Maranges et al., 2022; Mittal & Griskevicius, 2014). Adults who experienced more unpredictability in their childhood tended to be high in impulsivity and low in self-control, perceive more constraints and less personal control over their lives, and be less concerned about appearing to be a good, pleasant person (i.e., social desirability) (Maranges et al., 2022). High unpredictability in childhood was also associated with lower extraversion, agreeableness, conscientiousness, and

higher neuroticism (Maranges et al., 2022). Other work suggests that life history strategy links higher levels of environmental unpredictability in childhood and that cluster or personality traits (Chen et al., 2017).

Pause for Reflection

How are the reproductive strategies, health patterns, antisocial and prosocial traits, and personality traits adaptive responses to harshness and unpredictability?

Factors Contributing to Personality

Next, we will review the major contributors to personality that we have learned about throughout this textbook.

The Genetic Factor

There is increasingly strong evidence that many personality traits or dimensions are inherited, especially for Eysenck's dimensions of psychoticism, neuroticism, and extraversion (the latter derived from the work of Jung); McCrae and Costa's five factors and Goldberg's Big Five personality traits of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness; and Zuckerman's trait of sensation seeking.

Research involving twins from Canada, Germany, and Japan provides support for the genetic basis of the five-factor model of personality. The principal author of that study suggested that this may "represent the common heritage of the human species" (Yamagata et al., 2006, p. 96). As evidenced in behavioral genetic studies, extraversion, agreeableness, conscientiousness, openness, and neuroticism tend to have heritability estimates of around .4 or .5, leaving room for environmental effects and uncertain sources of variation in personality (Maranges & Reynolds, 2020; Vukasović & Bratko, 2015). Evidence for the strong genetic basis of personality traits was presented in a meta-analysis of over 130 studies representing more than 100,000 participants of diverse genders, ages, and cultures (Vukasović & Bratko, 2015).

Researchers have also investigated the genetic foundations of both personality and general interests, including in the domains of domestic–manual, investigative–scientific, artistic–creative, social–educational, hedonistic–enterprising, cultural–intellectual, and technical–logistic, in twin studies (Kandler et al., 2011). They found that both personality and interests were moderate to highly heritable, and that 35 percent of the genetic variance in interests were explained by personality, especially openness to experience.

Cross-cultural research finding that the Big Five personality traits emerge in most modern cultures supports the contention that these traits are genetically based, given that all humans are highly genetically similar, whereas our environments vary vastly. A large-scale research program ranging over 50 cultures as diverse as Israel, Korea, and Turkey found that the Big Five personality factors were displayed consistently in the majority of the nations studied. It was mostly in developing countries such as Ethiopia, Lebanon, Malaysia, and Uganda that the traits of the five-factor model were found less consistently (Allik et al., 2013; Heine & Buchtel, 2009; Ispas et al., 2014).

Maladaptive traits are also largely genetic predisposed. A study of adolescent twins (both fraternal and identical) in Sweden found a strong genetic component of the psychopathic personality prone to violent antisocial behavior (Larsson et al., 2006). Other twin research found that the degree of heritability of the trait of anxiety increased between the ages of 14 and 18 (Garcia et al., 2013).

In addition to finding genetic components in major dimensions of personality and maladaptive traits, researchers have also found that a broad array of characteristics are heritable. Studies in the United States, Finland, Quebec in Canada, and Sweden, for example, have found evidence of genetic influences on sexual attitudes; on eating behaviors in 2-year-olds; on depression in children who experienced bullying; on executive functions involved in controlling, monitoring, and coordinating basic cognitive processes; on attitudes

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Family, adoption, and twin studies provide evidence that personality has a large genetic basis.

toward playing a musical instrument; and on gun ownership (Barnes et al., 2014; Butkovic et al., 2015; Dubois et al., 2013; Engelhardt et al., 2016; Iyer et al., 2013; Westerlund et al., 2012).

No matter how many inherited traits there may be, however, not even the most ardent proponent of the genetics approach argues that personality can be completely explained by heredity. What we inherit are predispositions, not destiny; tendencies, not certainties. Whether our genetic predispositions are realized depends on social and environmental conditions, particularly those of childhood.

The Environmental Factor

Alongside genetics, environmental contributors to personality are powerful. Much research suggests that the environment is most impactful of our personality development in the early years of life, in childhood (Belsky et al., 2012; Brumbach et al., 2009; Ellis et al., 2009; Simpson et al., 2012). Nonetheless, environmental influences continue to affect our behavior and personality throughout our life (Briley & Tucker-Drob, 2014; Kandler, 2012).

Every personality theory we have discussed acknowledged the importance of our environment, whether at home, in our culture, or in broader society, in influencing personality. Adler spoke of the impact of birth order, arguing that personality is influenced by our position in the family relative to our siblings. We are exposed to different parental and social problems and challenges as a function of the age difference between our siblings, or whether we have siblings at all. In Adler's theory, these different home environments can result in different personalities. For example, only children tend to be more introverted, whereas middle children tend to be more extroverted and feel more strongly (Cotterill, 2022).

Horney believed that the culture in which we grow up can produce different effects, such as those she found in the different kinds of personality patterns exhibited by her German and American patients. She also pointed out the vastly different social environments to which children of different genders are exposed. She spoke of women's inferiority developing from the way girls are treated in a man-dominated and misogynistic culture. She suggested that women raised in a more gender egalitarian culture might have higher self-esteem and different personality characteristics. Horney's ideas have been applied in understanding, for example, the specific challenges that Black and Vietnamese American women face (Abrams et al., 2016). These women of color expressed feeling pressure to be nurturant caretakers but also varied in how much strength they felt they must evince in response to the culture's expectations.

Even Allport and Cattell, who inaugurated the trait approach to personality, agreed on the importance of the environment. Allport noted that although genetics supply the raw material of personality, it is the social environment that shapes the material into the finished product. Cattell argued that heredity is more important for some of his 16 personality factors than for others, but environmental influences will ultimately affect every factor to some extent. We might think that men are genetically predisposed to act aggressively relative to women, but as Allport and Cattel admit, it might require the environment to evoke it: Research finds that social pressure for men to be masculine in stereotypical ways makes it more likely that they will exhibit aggression (Stanaland & Gaither, 2021).

Erikson's eight stages of psychosocial development are innate, but the environment determines the ways in which those genetically-based stages are realized. He believed that social and historical forces influence the formation of ego identity. Maslow and Rogers contended that the potential and drive for self-actualization were innate but recognized that environmental factors could either inhibit or promote the self-actualization need. Indeed, self-actualization is a privilege insofar as it requires that all basic and psychological needs be met, too, which requires wealth and an extreme level of autonomy.

The view of Skinner is that all personality is evoked and reinforced patterns of behavior based on past experiences. Bandura built on that theory to suggest that we can also learn from watching the behaviors of others (models) and the responses to their behaviors.

Large-scale societal events such as wars and economic recessions can restrict our life choices and influence the formation of self-identity. More ordinary life changes, such as becoming parents, getting a divorce, or changing jobs, can also affect our personality. Research in Finland found that having children can bring about personality changes. Becoming a parent is associated with increased levels of stress and anxiety as well as lower levels of marital and life satisfaction. The study also demonstrated that emotionality increased in adults once they became parents; the more children they had, the greater the increase in level of emotionality (Jokela et al., 2009). Research in the United States, England, and Turkey also found that the status of parenthood lowers marital satisfaction. The more children a couple had, the lower the level of marital satisfaction (Wendorf et al., 2011).

Our jobs can also influence our personality. A study of young adults aged 18 to 26 living in New Zealand suggests this. Personality measures given at 18, and again at 26, showed that those who had satisfying, high-status jobs at 26 had increased in positive emotionality (well-being, social closeness, and feelings of achievement) and decreased in negative emotionality (aggressiveness, alienation, and stress) since age 18. The researchers concluded that the nature of the workplace has the potential to affect our innate personality traits (Roberts et al., 2003).

Stressful life events, such as the death of a spouse or the loss of a job, may influence personality. Adults in the United States were studied in their mid-40s and again 10 years later. Those who scored high in neuroticism came to believe that the stressful life event was a turning point in their lives. Those high in extraversion felt they would learn a lesson from the stressful event. Those who experienced these stressful events as negative turning points became more neurotic over time, whereas those who thought of them as an opportunity to learn became even more extraverted (Sutin et al., 2010).

Even the time period in which you were born and reared can influence your personality. Societal standards and attitudes, likes and dislikes, as well as the nature of external threats are different for each generation and can have a substantial influence on personality. This was supported by a major study comparing personality data of more than 50,000 college students and young people. These two birth cohort groups, one from the 1950s and one from the 1980s, found highly significant differences on two personality dimensions: anxiety and neuroticism. The 1980s group demonstrated substantially higher anxiety and neuroticism. These differences were attributed to decreases in social connectedness from the 1950s to the 1980s, as evidenced by a higher divorce rate, lower birth rate, later age at first marriage, and more people living alone during the 1980s (Twenge, 2000).

We also discussed that culture, including based on geography or race or ethnicity, is an important aspect of the environment that can shape personality. Western cultures tend to be more individualistic than Eastern cultures. People in Western cultures tend to score higher on extraversion, sensation seeking, and subjective well-being. People in Eastern cultures tend to score lower on these personality characteristics.

We noted in Chapter 14 the differences in subjective well-being that have been documented from one geographical region to another. There are also differences in other aspects of personality depending on where we live. For example, neuroticism is higher in northeastern and southeastern states of the United States. Agreeableness is higher in the southern states. Extraversion was found to be higher in the northeast and lower in the west (Rentfrow, 2010).

Personality can even vary by neighborhood. Children who grow up in economically disadvantaged neighborhoods are more likely to express maladaptive personality tendencies characterized by low resiliency and problem behaviors that can lead to social and emotional problems as they get older (Hart et al., 2008). A major study in the city of London found that the level of life satisfaction, agreeableness, conscientiousness, and openness to experience varied in different neighborhoods throughout the city (Jokela et al., 2015).

Racial and ethnic background and culture can also shape personality. We discussed examples of ethnic differences in such variables as sensation seeking, locus of control, and the need for achievement. We also learned that members of minority groups develop an ethnic identity as well as an ego identity and have to adapt to both cultures. The success of this adaptation affects personality and psychological health. Among people in Canada who identified themselves as members of minority groups, those with the strongest ethnic identities were highest in self-esteem and subjective well-being (Usborne & Taylor, 2010). A study of Mexican-origin adults in the United States found that individuals who subscribed to stronger Mexican cultural values tended to be higher in extraversion, agreeableness, and openness to experience (Atherton et al., 2022).

As we learned within this chapter, the broader geographical, social, and resource features of the environment over evolutionary time as well as over our lifetimes can shape our personalities. For example, the harshness and unpredictability of people's childhood environments shapes people's personality in terms of their health, romantic and sexual tendencies, Big Five, antisocial traits, and prosocial traits (e.g., Maranges & Strickhouser, 2021; Maranges et al., 2021, 2022; Martinez et al., 2022).

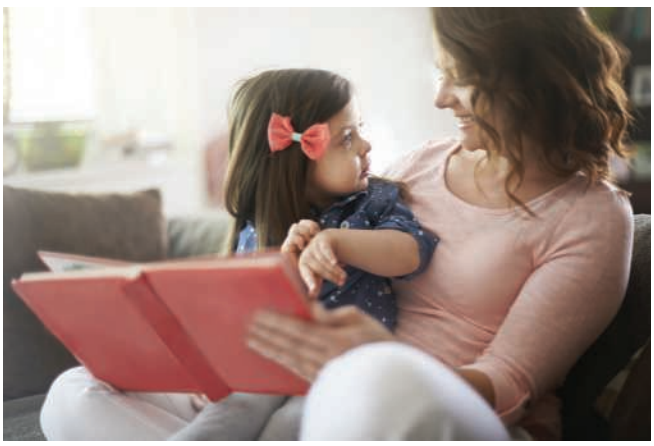
For all these reasons, then, it is impossible to deny the impact of diverse environmental and social forces on personality. The most significant way in which that impact is exerted is through learning.

The Learning Factor

Evidence is overwhelming that learning plays a major role in influencing our personality and related behaviors and goals (Bleidorn et al., 2010). Many of the social and environmental forces that shape personality do so by the methods of learning.

Even inherited facets of personality can be modified, disrupted, prevented, or allowed to flourish by the process of learning. Skinner taught us the value of positive reinforcement, successive approximation, superstitious behavior, and other learning variables in shaping what others call personality, but which he described as simply an accumulation of learned responses. Vast research supports Skinner's ideas that we learn through feedback over time, and his methods of reinforcement have been applied in interventions to help support people's well-being. For example, Behavioral Parent Training programs teach parents how to apply operant principles to reinforce their children's behaviors to reduce those that are maladaptive and encourage those that are adaptive (e.g., Segers et al., 2018). These programs have helped parents engage in productive parenting with children with development and psychiatric disorders as well as typically developing children. Skinner also discussed how we can use self-control to modulate our learning environments to reinforce behaviors that are consistent with our goals. Some have argued that such strategies contribute to how we learn skills and how our personalities can change over time (Goddard, 2018).

Bandura introduced the idea that we learn from watching models (observational learning) and through vicarious reinforcement. Bandura agreed with Skinner that most behaviors are learned and that genetics play only a limited role. He also suggested that our thoughts, or cognition, play an important role in learning as well. Observational learning shapes our level of aggression and antisociality at home, school, and online, learning from media, friends, teachers, and family. Such learning often occurs via observing violence in TV, movies, and video games. Recall that children, teenagers, and college students from around the world evince more aggressive behaviors (e.g., fighting with others, arguing with teachers) after playing violent video games (Anderson et al., 2010; Bartholow et al., 2005; Gentile et al., 2004; Holtz & Appel, 2011; Huesmann, 2010; Krahé & Möller, 2004; Padilla-Walker et al., 2010; Teng et al., 2019; Uhlmann & Swanson, 2004).



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Our personalities are influenced by what we learn early in life, especially from family.

But observational learning is also essential for the productive, adaptive, and prosocial traits and behaviors. We learn from models in the contexts of home life, school, and at work, and learn productive behaviors related to health, well-being, and prosociality. At work, people become more likely to respond justly to workplace bullies, standing up to them, after observing a coworker doing so (Hollis, 2019). Likewise, children learn to be more honest by watching other children tell the truth (Ma et al., 2018).

We discussed many aspects of personality that have scientific evidence to suggest that they are learned, such as self-efficacy (Bandura), locus of control (Rotter), learned helplessness, and optimism versus pessimism (Seligman). Individuals higher in self-efficacy, internal versus external locus of control, and optimism versus pessimism, and lower in learned helpless tend to engage in productive behaviors in the domains of health and social relationships; excel physically, cognitively, in school and at work; and tend to be happier and healthier (e.g., Bergvik et al., 2012; Brown et al., 2020; El-Anzi, 2005; Kariuki, 2020; Seligman, 2006; Singh, 2016; Sorrenti et al., 2021; Taiyi Yan et al., 2022; van Zyl & Dhurup, 2018).

The Parental Factor

Although Freud was the first theorist to emphasize parental influences on the formation of personality, virtually every theorist thereafter has echoed his views to some degree. Recall Adler's focus on the consequences for children who feel unwanted or rejected by their parents. Such parental rejection can lead to insecurity, leaving the person angry and deficient in self-esteem. Horney wrote from her own experience about how lack of parental warmth and affection can undermine a child's security and result in feelings of helplessness.

Allport and Cattell, whose work was based on the importance of traits, also recognized the parental factor in personality formation. Allport considered the infant's relationship with the mother to be the primary source of affection and security, conditions crucial to later personality development. Cattell proposed that infancy is the major formative period,

with the behavior of parents and siblings shaping the child's character.

Erikson held that a child's relationship with their mother in the first year of life was vital in promoting a trusting attitude. Maslow commented on how necessary it was for parents to satisfy their child's physiological and safety needs in the first two years of life. This was a prerequisite for the emergence of higher-order needs. Rogers discussed the parents' responsibility for supplying unconditional positive regard to their children. Skinner and Bandura both highlighted the importance of reinforcement from and modeling by parents for their children's behavior.

As we just learned, the more parents can create predictability and buffers against harshness, the better their children's outcomes will be in terms of adaptive personality profiles, self-control, health, and morality (Maranges & Strickhouser, 2021; Maranges et al., 2021, 2022).

We have also reviewed examples of how parental behaviors can determine, or undermine, specific aspects of personality, such as self-efficacy, locus of control, learned helplessness or optimism, and subjective well-being. For example, the parents of children who experienced depressive and anxious symptoms in adulthood were found to be more rejecting and abusive, and less caring and affectionate, than parents of adults with better mental health (Brewin et al., 1993). Parental behaviors can influence primarily inherited traits such as sensation seeking. You can easily imagine how uncaring and punitive parents could stifle the emergence of inherited traits such as extraversion, sociability, agreeableness, and openness to experience. Children whose mothers were very sensitive to their needs during the first three years of their lives were more competent in their social and romantic relationships as well as better parents when they had children, as evidenced by longitudinal research in America (Raby et al., 2015).

There is a great deal of evidence implying that children of parents who are described as authoritative (that is, warm but firm in their child-rearing practices) are more competent, mature, and psychologically healthy than children of parents described as permissive, harsh, or indifferent. Researchers have noted that

> Authoritative parenting is associated with a wide range of psychological and social advantages in adolescence, just as it is in early and middle childhood . . . the combination of parental responsiveness and demandingness is consistently related to adolescent adjustment, school performance, and psychosocial maturity. (Steinberg & Morris, 2001, p. 88)

A study of adolescents in Singapore found that those whose parents were authoritative had greater confidence in their abilities and were better adjusted socially than those whose parents were authoritarian (strict, harsh, and demanding obedience) (Ang, 2006). Another study with teenagers in Iran suggests that authoritative, which is firm but warm, parenting supports students' mastery approach and diminishes the likelihood that they will be high in psychoticism (Asanjarani et al., 2022). A longitudinal study in the United States following participants from age 5 to 31 found that restrictive, cold, and strict parenting of the 5-year-olds predicted those individuals' growing up to be adults high in conformity and low in self-direction (Kasser et al., 2002).

Parents' personalities also shape their parenting strategies and their children's personality in turn. A large-scale analysis of parent–child relationships found clear evidence that parents who were high in extraversion, agreeableness, conscientiousness, and openness to new experience behaved in more warm and consistent ways toward their children than parents who scored low on those factors. Parents higher in agreeableness and lower in neuroticism were also much more supportive of their children's independence (Prinzie et al., 2009). Consistent with Bandura's view, parents play a major role in teaching their children to be kind, caring, and helpful to others in need (Fortuna & Knafo, 2014).

Accordingly, parents who evince a lot of negative emotions or hostility are likely to parent in ways that reinforce and model negativity and hostility in their children.

Mothers high in neuroticism and disagreeableness had children who scored higher in defiance, anger, disobedience, and other behavior problems than did mothers who did not exhibit negative emotional qualities (Kochanska et al., 1997). Similarly, in another study, mothers high in hostility tended to raise children who become hostile as well (Raikkonen et al., 2000).

Parenting can also shape children's attachment throughout the life span. For example, in a study of Israeli adults, those who did not experience adequate maternal care were higher in avoidant attachment and lower in feeling entitled to relational warmth (Shadach et al., 2018). Similarly, adults who did not experience adequate paternal care as children were more anxiously attached, and, in turn, lower in feeling that they deserved close relationships. Attachment style has many implications for social functioning, including moral decision making (Maranges et al., 2021).

These results also highlight that one thing some of the theories missed is that people's relationships with their fathers are also very important for their personality development. Indeed, in study of over 700 Norwegian fathers and their 1-year-old children,

parents' positive involvement predicted better attentional abilities and less negative reinforcement predicted better developmental trajectories and communication abilities (Nordahl et al., 2016).

What happens in situations when parents are not the primary caregivers, that is, when parents share child-rearing responsibilities with day-care workers, friends, or family members while they work outside the home? A national longitudinal survey of children ages 3 to 12 found no negative effects of women parents working outside the home (Harvey, 1999).

Recall that there are also cultural differences in parenting, which likely contribute to cultural differences in personality. For example, parents in collectivist cultures tend to be more authoritarian than authoritative. A study of mothers who had immigrated with their children to Canada found that the women from collectivist cultures such as Egypt, Iran, India, and Pakistan were more authoritarian than women from individualistic countries in Western Europe (Rudy & Grusec, 2006). Similar patterns of results emerge in research with Chinese mothers living in Canada compared to non-Chinese mothers in Canada (Liu & Guo, 2010).

Researchers who subscribe to the primacy of genetic factors in personality also tend to reject or minimize the parental effect, suggesting that the family environment contributes little to personality. There is indeed a lot of evidence that genes matter. But more relevant here, note that focusing on the link between parent behaviors and personality in children ignores a conflation of genetic relatedness. That is, parents have certain genes that give rise to their personalities and also parenting style; parents pass on those genes to their children, and those genes give rise to the children's personality traits. Indeed, a study of more than 20,000 families in a variety of countries from Australia to Japan to the United States found that genetic factors accounted for as much as 40 percent of parental behavior (Klahr & Burt, 2014). Furthermore, the children's personalities (that had largely been inherited from the parents) evoked certain parenting styles from the parents.

There is no doubt that teachers, peers, and others also influence personality development over time. A related question is whether personality is fixed in early life by these influences or whether it can be changed in later years. And that brings us to the developmental factor.

The Developmental Factor

What do different theories and theorists of personality have to say about the development of personality? Freud believed that personality was shaped and fixed by the age of 5 and that it was difficult after that to change any aspect of it. As we discussed in Chapter 2 and this one in the behavioral ecology section, research suggests that specific aspects of the physical and social environment are most impactful for children before the age of 5 or 10. Nonetheless, research also indicates that personality continues to develop well beyond childhood, perhaps throughout the entire life span.

Theorists such as Cattell, Allport, and Erikson considered childhood important but agreed that personality could be modified in later years. Some theorists suggested that personality development is ongoing in adolescence, whereas Jung, Maslow, Erikson, and Cattell viewed middle age as a time of major personality change.

The question is, how long does our personality continue to change and grow? Does your personality at age 18 indicate what you will be like at 48? As with many questions about personality, this one is somewhat complex.

Within individuals, personality is relatively stable, with traits remaining close to the same level across time and situations. Of course, the life changes and situations we face vary across developmental phases, such that the same traits are manifested in different ways. Additionally, there is a maturity effect: In adulthood, people become more settled, calm, and considerate of others. These patterns are particularly evident with Costa and McCrae's and Goldberg's five personality traits. Individuals' levels of the Big Five—extraversion, conscientiousness, agreeableness, openness to experience, and neuroticism—tend to remain stable across life, with stability increasing in adulthood, as evidenced by research from around the world (Ferguson, 2010; Hampson & Goldberg, 2006; Nave et al., 2010; Roberts & Delvecchio, 2000; Terracciano et al., 2010). In a study of children ages 8 to 12, who were surveyed again 10 years later, personality changes between the ages of 18 and 22 could be predicted to a significant extent by their personality characteristics in childhood (Shiner et al., 2002). Similarly, and in an even longer investigation, people's personality profiles remained similar from adolescents to 50 years later (Damian et al., 2019). Extraversion and conscientiousness seem to be the most stable of the Big Five, evidenced by a study of individuals from elementary school to midlife 40 years later (Hampson & Goldberg, 2006).

For the Big Five, the maturity principle entails that neuroticism, extraversion, and openness decline from college age to middle age, whereas the factors of agreeableness and conscientiousness increase with age. Cross-cultural comparisons have demonstrated this consistency in such diverse countries as the United States, Germany, Switzerland, Italy, Portugal, Croatia, the Netherlands, Australia, and South Korea

(Allemand, Zimprich, & Hendriks, 2008; Allemand, Zimprich, & Martin, 2008; Lucas & Donnellan, 2009; McCrae & Costa, 1997; McCrae et al., 1999). The same study that followed people for 50 years after adolescence also demonstrated that 20 to 60 percent of the people showed reliable maturity in their personality profiles (Damian et al., 2019).

We also observe that personality increases and decreases according to the demands of one's life stage. Young adulthood is a time that requires increasing opportunity for exploration, cooperation with others, and personal responsibility, such that college students tend to become more open, agreeable, and conscientious (Vaidya et al., 2002). A study of people in New Zealand ages 18 to 26 found that personality changes during that period showed an increasing level of psychological maturity. The participants became more self-controlled and confident in social situations, and less angry and alienated (Roberts et al., 2001). Similarly, a study of more than 32,000 people ages 21 to 60 found that conscientiousness increased most strongly in the 20s and agreeableness increased most strongly during the 30s (Srivastava et al., 2003). Adulthood introduces changes in economic circumstances, leaving college, marriage and parenthood, divorce, job loss or advancement, midlife crises, and aging parents, which introduce challenges to which adults must adjust (McAdams & Olson, 2010). A three-year study in the Netherlands of people in their 40s found that those who had evinced the pattern associated with the maturity principle also felt they succeeded more as family members and at work (Van Aken et al., 2006).

It can be helpful to think about different types of characteristics changing differently over time: dispositional traits, personal concerns, and life narrative (McAdams, 1994). *Dispositional traits* are inherited traits of the kind discussed by McCrae and Costa, those characteristics found to remain stable and relatively unchanging from age 30 on.

Personal concerns refer to conscious feelings, plans, and goals; what we want, how we try to achieve it, and how we feel about the people in our lives. These may change often over the life span as a result of the diverse situations and influences to which we are exposed. Although these situations can alter our feelings and intentions, our underlying dispositional traits (such as our basic level of neuroticism or extraversion) with which we confront these life situations may remain relatively stable.

Life narrative has to do with shaping the self, attaining an identity, and finding a unified purpose in life. We are constantly writing our life story, creating who we are and how we fit into the world. Like personal concerns, the life narrative changes in response to social and environmental situations. As adults, we may adjust our narrative to adapt to each stage of life and its needs, challenges, and opportunities. For these reasons, whether we view an event as positive or negative may impact the way our personality changes (e.g., De Vries et al., 2021).

In sum, then, the underlying dispositional traits of personality remain largely constant, with some maturing over time, while our conscious judgments about who we are and who we would like to be are subject to change. That idea leads to another factor personality theorists have considered: consciousness.

The Consciousness Factor

Almost every personality theory we have described, except for Skinner's, gives credence to the idea that our personalities are impacted by or contributed to by conscious processes, or those processes of which we are aware and that we can influence via deliberate, cognitive processes. Even Freud and Jung, who focused on the unconscious, wrote of an ego or conscious mind that perceives, thinks, feels, and remembers, enabling us to interact with the real world. Jung wrote about rational functioning, making conscious judgments and evaluations of our experiences. Conscious processes of self-regulation and cognitive representations of one's self-efficacy have been linked to Jung's constructs of ego strength and individuation, or realizing one's personal potential, as evidenced in a study of Indian adults (Singh, 2016).

Horney suggested that the way we think about our gender can shape our personality. Adler described humans as conscious, rational beings capable of planning and directing the course of our lives. We formulate hopes, plans, and dreams and delay gratification, and we consciously anticipate future events. Allport believed that most people will function in a conscious, rational way, aware of and in control of the forces that motivate them. Rogers thought people were primarily rational beings, governed by conscious perceptions of themselves and their world of experience. Maslow also recognized the role of consciousness when he proposed cognitive needs to know and to understand, and people's conscious thoughts can shape their trajectories to self-actualization. Indeed, people's explicit, consciously represented goals, such as to gain status, make friends, find a partner, and care for family, are central to their self-actualization (Krems et al., 2017).

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Our personalities remain pretty stable over time, but we also tend to mature with life events that demand it, such as getting a job as an adult.

Kelly offered the most complete theory based on cognitive factors. He argued persuasively that we form constructs about our environment and other people and that we make predictions about them based on these personal constructs. We formulate hypotheses about our social world and test them against the reality of our experience. Based on everyday and research evidence, it is difficult to deny that people construe, predict, and anticipate how others will behave and then modify or adapt their behavior accordingly.

Bandura credited people with the ability to learn through example and vicarious reinforcement. To do so, we must be able to anticipate and appreciate the consequences of the actions we observe in others. We visualize or imagine the results of our reinforcements for behaving the same way a model does, even though we may never have experienced those consequences personally. Bandura also specified a sequence of cognitive processes in which we engage to learn via observation: attention, retention, production, and motivational processes. For example, in the context of football (soccer) in Spain, researchers have found that better skill acquisition has been linked to higher level attentional, retention, production, and motivational processes (Huang & Liu, 2020). Deliberately practicing constituent parts of a broader skill helps one learn and improve in that skill. Consider musicians (Bonneville-Roussy & Bouffard, 2015; Nielsen et al., 2018). The more they engage in formal practice, deliberately warming up and then performing technical exercises such as playing each of the scales or sight-reading, or practice with other student musicians and learning from each other, the better they will play their instruments over time.

Thus, there is widespread agreement that consciousness exists and is an influence on personality. Next we discuss the subject of more debate—the role of the unconscious in personality.

The Unconscious Factor

Sigmund Freud formally introduced to psychological theory the idea of the unconscious, that murky repository of our darkest fears, conflicts, and desires that affect our personality, our conscious thoughts and behaviors. Psychologists have found some evidence to support Freud's notion that thoughts and memories are repressed in the unconscious, and that repression (as well as other defense mechanisms) may operate at the unconscious level. For example, for Pakistani medical students, those that employed less healthy ego defense mechanisms performed less well academically than did people who employed healthier defense mechanisms (Waqas et al., 2015).

The cognitive movement in psychology has led to not only an interest in conscious processes but also a renewed interest in the unconscious. However, the modern depiction of the unconscious is not the same as Freud's view. Contemporary researchers focus on unconscious cognitive processes.

In modern psychology, the unconscious is often referred to as the nonconscious, to distinguish it from Freud's unconscious, his so-called dark cauldron of repressed wishes and desires. One method for studying the nonconscious involves subliminal activation, in which various stimuli are presented to participants below their level of conscious awareness. Despite their inability to perceive the stimuli, their conscious processes and behaviors can be activated by those stimuli. Consistent with the theoretical attention Freud paid to fear, modern research suggests that the mind automatically more quickly processes and responds to stimuli representing real physical threats (e.g., growling animals, guns, and snakes) compared to other types of stimuli (March et al., 2017, 2018); crucially, this processing advantage obtains even when the stimuli are outside of conscious awareness using the modern subliminal approach (March et al., 2022).

Subliminally presented stimuli can have positive effects as well. We also discussed the "Mommy and I are one" study about how subliminal presentation of certain stimuli influenced cognitive as well as emotional responses (Silverman & Weinberger, 1985). The subliminal stimuli had therapeutic value even though the participants had no conscious awareness of the actual messages.

Modern research has found that people high in neuroticism, especially women high in neuroticism, excel at picking up on and responding to stimuli outside of conscious awareness, evidenced in research with young adults in Spain (Sutil-Martín & Rienda-Gómez, 2020).

Jung built on Freud's ideas, including how to interpret dreams, which they argued captured unconscious worries and wishes. There is support for this idea generally, that dream narratives reflect individuals' real-life challenges and opportunities, rather than supporting specific interpretations of dream objects as symbols of specific psychological states. For example, in an analysis of over 200 dreams of individuals 16 to 56 years old, dream patterns, usually one or two, reflected the current life challenges and opportunities that the individuals faced in their waking lives as well as their personalities more broadly (Roesler, 2018). The analytic framework applied here identified five major dream patterns: (1) no ego present, (2) dream ego is threatened, (3) dream ego is confronted with a performance requirement, (4) dream ego is moving toward a specified or unclear destination, and (5) dream ego is occupied with making contact or communicating with another person or figure in the dream.

Jung also proposed the collective unconscious, from which we are influenced by and derive understanding of various archetypes. The collective unconscious, according to Jung, is the deepest level of the psyche containing the accumulation of inherited experiences of human and pre-human species. This idea is very hard to test, and there is not a lot of evidence for shared unconscious per se. However, what Jung very incisively observed are the shared attributes and predispositions that all people tend to have. On average, we are predisposed to rely on and respond to caretakers in a similar way, to cooperate with each other, to seek out romantic partners, and to use symbols to represent words and sentences to articulate our ideas, as some examples. The universality of these tendencies is due to our evolved nature, as they are adaptive responses to challenges faced by virtually everyone's ancestors.

Although the unconscious is an ongoing research topic in psychology today, many of the personality theorists coming after Jung ignored it. We might suggest that the unconscious as Freud envisioned remains less understood than conscious factors.

Whole Trait Theory

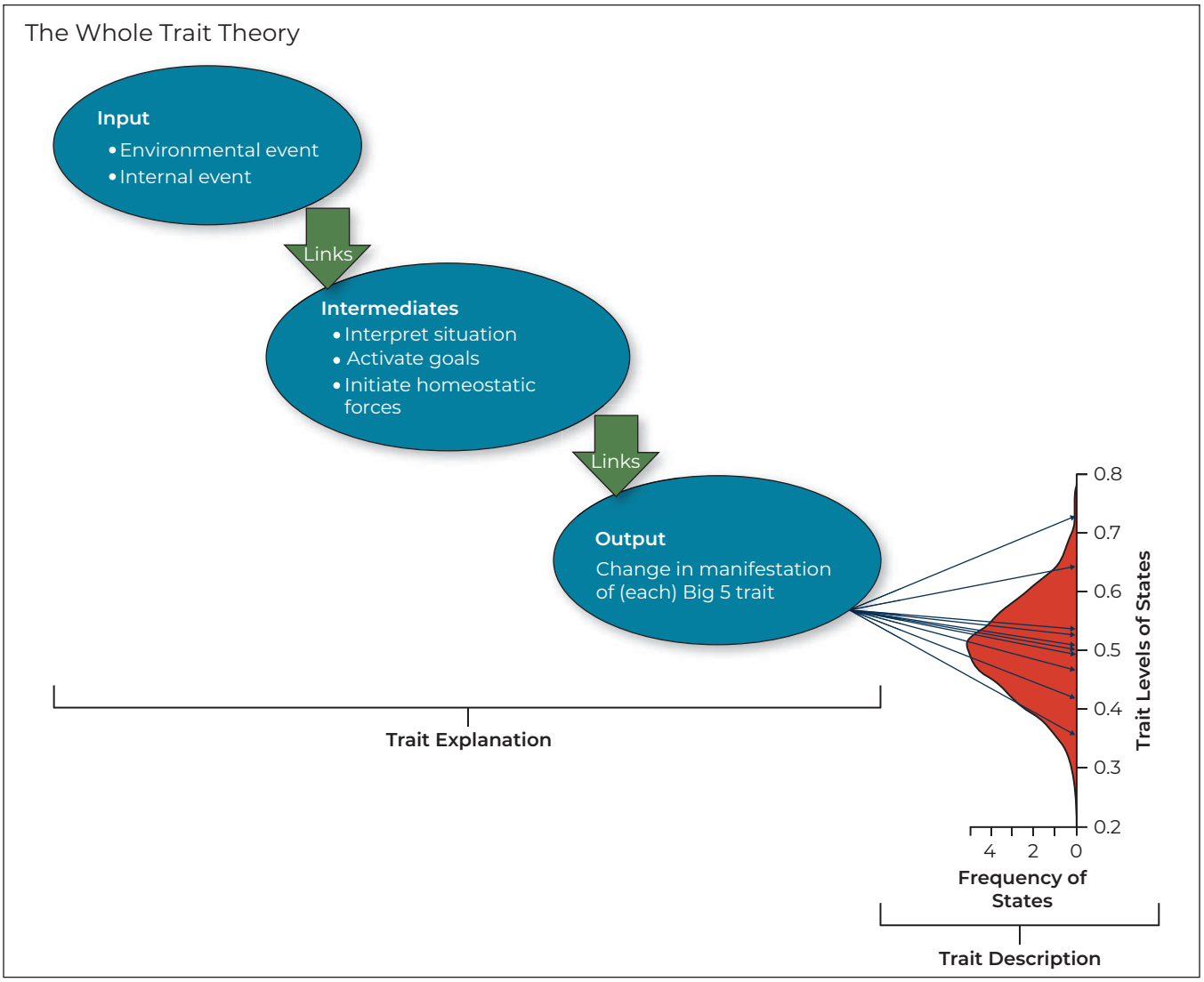
Modern personality theorists underscore the importance of taking into consideration the person, the situation, and the person–situation interaction in understanding personality (e.g., Furr & Funder, 2018). Pioneered by personality theorists Drs. William Fleeson and Eranda Jayawickreme of Wake Forest University, **whole trait theory** (WTT) brings together different contributors to personality and aspects of individual psychology to create a fuller understanding of what a trait is (Fleeson & Jayawickreme, 2001, 2015; Jayawickreme et al., 2019). Traits can be understood as internal causes of idiosyncratic patterns of thoughts, feelings, and behaviors. In this view, traits are *explanations* of behaviors. For example, someone has high levels of the trait of extraversion, and this causes them to desire social contact, engage in social behavior, speak a lot, dominate conversations, and feel good after engaging in those behaviors. From a different view, traits can be understood as *descriptions* of those patterns of thoughts, feelings, and behaviors. In this view, someone who often desires social contact, engages in social behavior, speaks a lot, dominates conversations, and feels good after engaging in those behaviors is labelled as extraverted because their behaviors are extraverted. The WTT argues that it is important to consider both the explanation (internal aspect) and description (patterns of behaviors) to understand what personality traits are as a *whole*. Refer to Figure 15.1.

Across time and different situations, we engage in a diverse array of behaviors that can be described as high or low in extraversion, agreeableness, conscientiousness, openness to experience, and neuroticism. These behaviors vary by what the situation demands and by our goals. For example, the company for which you work may have an end-of-year holiday party; everyone is expected to attend, and it's a great opportunity to get to know new employees and nurture social relationships with existing coworkers. Regardless of where you and your coworkers each land on the extraversion–introversion scale, you will probably evince extraverted behaviors: being social, gregarious, entertaining, and feeling positive affect. In contrast, the work week leading up to the end of the year demanded that you and your coworkers all efficiently complete your existing projects, make memos on each of them, plan out projects for the new year, and file planning documents. To meet these demands, regardless of how high or low you consider yourselves to be on conscientiousness usually, conscientious behaviors are the ones that will help you accomplish your work goals: organizing, planning, note-taking, detail-checking, and so on. Thus, you can think of the behaviors in different situations as *states* of personality (versus traits of personality).

WTT researchers have found that the internal trait of extraversion is not what causes the concomitant

whole trait theory Posits that traits are made up of an internal aspect that causes behaviors (*explanation*) and the distribution of behaviors that correspond to those traits across time and situations (*description*).

Figure 15.1



Source: Fleeson, W., & Jayawickreme, E. (2015). Whole trait theory. *Journal of Research in Personality*, *56*, 82–92.

higher positive affect associated with extraversion. The behaviors themselves are. In one experiment, for example, people visited the lab to interact with other people, and they were instructed to act in extraverted ways (i.e., bold, talkative, energetic, active, assertive, and adventurous) or introverted ways (i.e., reserved, quiet, lethargic, passive, compliant, and unadventurous). Results indicate that regardless of people's trait extraversion–introversion levels, behaving in more extraverted versus introverted ways made the experience more enjoyable, and people felt more positive feelings (Fleeson et al., 2002; also McNiel & Fleeson, 2006). This suggests that some of the associated psychological experiences, outcomes, and reinforcements of certain traits have to do with the behaviors that constitute the trait.

The internal trait accounts for a broad collection of emotional trends, cognitive beliefs, and identity-related processes that drive behaviors, which tend to be similar across time and situations. Using momentary ecological assessment techniques, these researchers collected data multiple times every day for around two weeks on people's thoughts, feelings, beliefs, identities, goals, and behaviors as well as the situations they were in. They found that some people engage in more extraverted behaviors, while some people engage in more introverted behaviors across time and situations. How often individuals engage in extraverted behaviors is a metric of how extraverted they are. Moreover, how extraverted a person is one week is correlated with how extraverted they are the next week. Even if they are

not constantly engaging in extraverted behavior, they behave extraverted more than others who are lower in extraversion and higher in introversion. This is adaptive: Regardless of how strong the internal trait causing extraversion and weak the internal trait causing conscientiousness is for you, there are times (like the last week of work before the holidays) when you need to be less extraverted and more conscientious. Put another way, behaviors reflecting different traits can be used strategically to pursue different goals (McCabe & Fleeson, 2016). At the same time, researchers also found that when they put different people in the same situation that evokes extraversion in the lab, people with the stronger internal trait of extraversion acted more extraverted than people lower in the trait.

The WTT also broadens our conception of personality in another way. The internal traits do not just cause thoughts, feelings, and behaviors, but they also catalyze our beliefs, identities, and goals, which then feed into thoughts, feelings, and behaviors. Part of why people vary so widely in what is captured in personality traits like extraversion and conscientiousness is that they vary so widely in those beliefs, identities, and goals as well. Calling back to reinforcement learning, behaviors are positively and negative reinforced over time, such that learning occurs. In this way, personality change is possible slowly over time, when some behaviors increase and others decrease, and collateral changes in thoughts, feelings, beliefs, identities, and goals occur. For example, the feeling of pride, compliments from coworkers, and increased likelihood of receiving a promotion serve as rewards for conscientious behavior over time, increasing the likelihood that you will behave in conscientious ways for more than just the last week of the year. Those behavioral changes and reinforcements also influence more internal mechanisms of personality change, pushing and pulling on the internal trait itself.

In sum, whole trait theory offers a fuller conception of what traits are: internal entities (explanation) that drive behaviors, which can be classified according to the trait taxonomy (description) and are shaped by the demands of situations and by reinforcements over time.

Pause for Reflection

What are the explanations and descriptions for your personality traits?

DEI Spotlight

Evolutionary Theories of Personality and Diversity, Equity, and Inclusion

Evolutionary theories, which provide a broad and historic context for understanding individual differences and the costs and benefits of personality traits, have been applied to understand DEI issues of individuals, families, and society.

Individuals, Family, and Society. Here we focus on Dr. Tania Reynolds, who holds a PhD in social and personality psychology and is currently in the Department of Psychology at the University of New Mexico, as the individual in the DEI spotlight. We also focus on her research, which applies evolutionary theory to understand personality and social processes with implications for diverse people, families, and society.

Dr. Reynolds is a Hispanic woman whose Spanish–Mexican mother was raised by a single mother. That single mother, Dr. Reynold's *abuela*, spoke only Spanish, never married, and worked as a hotel housekeeper to support her child. During that time in history, like much further back in our evolutionary time, it was rare that women were both caregivers and breadwinners for their families. The struggles and experiences of her *abuela* and mother motivated Dr. Reynolds to systematically study women's evolved approaches to romantic and social relationships.

As we discussed in the prior section "Biological Sex Differences," our female ancestors faced steep costs to having and caring for children, and they largely relied on males to provide survival resources for themselves and their children. Without a male partner, ancestral females were vulnerable to starvation and danger. Females tend to score higher than males in neuroticism and anxiety generally, given the adaptive value of those traits. But Dr. Reynolds dug deeper to understand how reproductive biology is linked to relationship anxiety. Consider the female ovulatory (menstrual) cycle. Each cycle, after ovulation, in the luteal phase, a woman's progesterone levels rise to prepare her body for the possibility of pregnancy by

DEI Spotlight, continued

Evolutionary Theories of Personality and Diversity, Equity, and Inclusion

© Dr. Tania Reynolds

Dr. Tania Reynolds applies evolutionary theories to understand individual differences, social relationships, and issues of DEI.

thickening the uterine lining for implantation. For our female ancestors, pregnancy was a period marked by heightened vulnerability and resource need (e.g., limited mobility, higher caloric intake); accordingly, during this time, personality states or feelings tied to concern about keeping a mate may be particularly adaptive. This is what Dr. Reynolds and colleagues (2018) found in multiple studies with Polish and American participants: As females' progesterone levels rose across each cycle, so too did their anxiety about their romantic relationships (Reynolds et al., 2018).

Dr. Reynolds has also investigated women's relationships with each other. Women's relationships with other women are of particular importance in the evolution of personality and social processes because of "patrilocality." Patrilocality describes how, in ancestral societies, females would move away from their own families to live with their male partners' families. Unable to take advantage of kin selection processes, females had to adapt in ways that facilitated social and familial connections with genetically unrelated females. To maintain these relationships, kindness, commitment, and similar social status became particularly important because those traits facilitated generosity, forgiveness, relationship longevity, and relationship stability. Thus, female individuals should have evolved not only to exhibit kindness and commitment, but also to look for these traits in others (Reynolds, 2021), consistent with the social partner choice theory of personality. This prediction bears out empirically. Dr. Reynold's research finds that females are more likely than males to end a friendship if their same-sex friend does not display cues of kindness or commitment (Reynolds & Palmer-Hague, 2022). Furthermore, other work finds that females are more likely than males to end a friendship over various transgressions and less likely to collaborate with females of divergent social statuses (Reynolds, 2021). The implication of that research is that healthy, cooperative female relationships will be supported and encouraged to the extent that forgiveness is supported and encouraged.

Dr. Reynolds has also applied evolutionary theories having to do with social partner choice to understand and intervene on problematic and pervasive prejudice against gay men (Winegard et al., 2016). Because ancestral males were often physically competing against other groups (e.g., in warfare), they faced selective pressures to form large, cohesive groups of individuals that could fight well. Thus, males likely evolved to prioritize traits advantageous in coalitionary competition, such as courage, a high pain tolerance, and dominance, in their same-sex peers. Stereotypes of gay men include low courage, pain tolerance, and dominance. This is what Dr. Reynolds and her team demonstrated across multiple experiments: Men perceived other men known to be gay as lacking coalitionary skills, such as dominance and courage, and were in turn more likely to choose to work with other men on cooperative tasks.

How might such prejudice be reduced? Individuate, or share more details about the personality of the individual. For example, when stereotype-inconsistent information about a gay man was shared, sexual orientation no longer mattered to men's social partner preferences; they just wanted a teammate who would be good at the task (Winegard et al., 2016). Additionally, when men were tasked with selecting

DEI Spotlight, continued

Evolutionary Theories of Personality and Diversity, Equity, and Inclusion

a partner for a competition that did not require these stereotypical masculine traits (e.g., poetry), men no longer exhibited a preference for stereotypically masculine partners. These results highlight that male social choice psychology is sensitive to the nature of the competition at hand, an insight that may aid in facilitating more inclusive spaces for men of all sexual orientations. That is, one potential strategy to reduce bias and prejudice against gay men is to emphasize a wider array of traits that are valuable for society's coalitional success. We need individuals who are courageous, but we also need individuals who are risk-averse, dominant but also cooperative, systematic but also creative, and so on. This fits with the ecological niche specialization theory as well.

All in all, Dr. Tania Reynolds' work applies evolutionary theories in novel ways to understand individual differences and social processes, including for DEI subjects.

Chapter Summary

Evolutionary theories of personality offer a complementary perspective on why we have the traits we have and why we vary in those traits across people. The first set of evolutionary theories deals with why specific traits have emerged, with a focus on the five factors of personality. The primal emotional systems theory contends that evolutionarily old emotional systems in our brains give rise to the Big Five factors through specific combinations of positive (lust, care, play, seeking) and negative (anger, sadness, fear) emotions. Other theories that explain why certain traits emerge suggest that personality traits are adaptive solutions to challenges faced by our ancestors, and each of the Big Five comes with benefits to the survival and reproduction of the individuals as well as of their romantic/sexual and social partners. Yet, people vary in the level of those traits. Why? Another set of theories helps answer this question.

In assortative mating, people tend to reproduce with people like themselves in personality, having children who have similar levels to them in personality traits. This leads to the maintenance of high and low levels of personalities that might be averaged out by disassortative mating. Biological males and females faced different challenges over evolutionary time, especially with regard to investment in reproduction. Biological females carry the child in pregnancy, give birth to the child, and nurse the child via breastfeeding. In our evolutionary past, they were also expected to be the primary caregivers of children. These biological and social pressures favored traits associated with being caring and careful. Males tended to be providers of food and safety and were often allowed to have multiple mates, such that traits tied to assertiveness, risk taking, and sexual openness were favored.

One of the most important sets of evolutionary theories of personality is that which considers how the environment shapes personality. The ecological niche specialization theory suggests that the more complex a society, the more social roles are available to be filled, and in turn, the more diverse personality profiles that are adaptive. Life history theory proffers an explanation of personality in light of organisms', including humans', environmental challenges over evolutionary time, limited time and energy and the trade-offs we must thus make in our reproductive strategies. Psychologists have built on and expanded that theory in the field of behavioral ecology to understand how harshness and unpredictability, especially within an individual's own development, shape a broad array of traits, including those related to reproduction, health, antisociality and prosociality, and personality.

We also tied together what we have learned across this textbook by considering the factors that shape, contribute to, and interact with personality: genetic, environmental, learning, parental, developmental, conscious, and unconscious factors. We end with consideration of the whole trait theory. The whole trait theory brings together a few of these factors—for example, the environmental, learning, and conscious factors—to explain personality more holistically. Traits have two primary components. The first component is an internal entity (*explanations*) that causes idiosyncratic patterns of thoughts, feelings, and behaviors. By observing that pattern of thoughts, feelings, and behaviors, we can classify the

trait (*description*), the second component. The pattern of thoughts, feelings, and behaviors can be thought about as states of personality, which can serve specific goals and demands of varied situations. Accordingly, people evince a diversity of state personality traits; but the more they exhibit behaviors associated with the trait, the higher they can be said to be in that trait. This theory also emphasizes that beliefs, identities, goals, and so on link the components to each other.

Final Comment

As you have learned throughout this course, most aspects of personality also remain mysterious, and some are still not fully accessible. We have gone through diverse ways of defining and describing personality, and each theory we have discussed has contributed another part of the answer to that vital question of what is personality.

We have gone from the viewpoints of Sigmund Freud and his emphasis on anxiety, the unconscious, and a life of fear and repression to positive psychology and the characteristics of the happy personality. And we have covered many other ideas in between, all of which have added to our understanding. But there are more possibilities to consider, more to be learned, and no doubt new approaches will be presented—new theories as yet unimagined.

Your formal course work in this field may be ending, but the attempt to understand personality is not. Although it is true that enormous progress has been made in charting personality and detailing the factors that shape it, the challenges of the field remain active and dynamic. Perhaps the question, "What is personality?" is the most important question of all for psychology, for it reflects the attempt to understand ourselves.

Review Questions

1. Describe how evolution by natural selection shapes personality in adaptive ways.
2. How do primal emotions combine to form personality traits?
3. What are the costs and benefits of each of the Big Five personality traits for the individual? For their romantic/sexual partners? For their social partners?
4. Explain how assortative mating serves to maintain variation in personality traits.
5. Provide three examples of frequency-dependent traits, and analyze at what frequencies they tend to be adaptive versus maladaptive.
6. Compare and contrast the reproductive demands and survival challenges that males and females faced in our evolutionary past.
7. Describe how personality traits differentially helped males and females in our evolutionary past.
8. How do ecological niches shape personality profiles?
9. Explain the basic tenets of life history theory.
10. How do environment harshness and unpredictability relate to reproductive traits, health, antisociality and prosociality, and personality?
11. Compare and contrast the contributions of genetic factors and environmental factors to our personality.
12. Describe the processes by which learning shapes our personalities.
13. What role do parents play in our personality?
14. How and why does personality remain stable and change over time?
15. Explain how diverse cultures and identities shape our personalities.
16. Compare and contrast the contributions of conscious factors and unconscious factors to our personality.
17. Define each of the components of the whole trait theory and how they are interrelated.
18. What is your favorite theory of personality and why?

Suggested Readings

- Fleeson, W., & Jayawickreme, E. (2015). Whole trait theory. *Journal of Research in Personality*, *56*, 82–92.
- Furr, R. M., & Funder, D. C. (2018). Persons, situations, and person-situation interactions. *Handbook of Personality: Theory and Research*, *4*.
- Maranges, H. M., & Reynolds, T. A. (2020). Evolutionary theory of personality. *The Wiley Encyclopedia of Personality and Individual Differences: Models and Theories*, 185–197.
- Maranges, H. M., & Reynolds, T. A. (2020). Heritability. *The Wiley Encyclopedia of Personality and Individual Differences: Models and Theories*, 243–247.

Glossary

A

ability traits Traits that describe our skills and how efficiently we will be able to work toward our goals.

actualization tendency The basic human motivation to actualize, maintain, and enhance the self.

adaptations Evolved traits that solved problems and helped overcome challenges in our ancestors' environment.

aggressive drive The compulsion to destroy, conquer, and kill.

aggressive personality Thoughts, feelings, and behaviors associated with the neurotic trend of moving against people, such as a domineering and controlling manner.

agreeableness One of the five main personality traits, characterized by niceness and cooperation, and is opposite disagreeableness.

analytical psychology Jung's theory of personality, which emphasizes the role of psychic energy and both the individual and shared unconscious.

anima archetype Feminine aspects of men's psyche.

animus archetype Masculine aspects of women's psyche.

anxiety To Freud, a feeling of fear and dread without an obvious cause.

archetypes Images of universal experiences contained in the collective unconscious.

assortative mating When people who are similar to each other in personality have children together, thereby maintaining variation in personality traits across people.

avoiding type Personality and style of life characterized by avoidant thoughts, feelings, and behaviors.

B

balancing selection Leads to variation in personality traits in a population because the traits have trade-offs, costs, and benefits depending on the environment.

basic anxiety A pervasive feeling of loneliness and helplessness; the foundation of neurosis.

basic strengths To Erikson, character virtues that derive from the satisfactory resolution of the crisis at each developmental stage.

basic weaknesses Motivating characteristics that derive from the unsatisfactory resolution of developmental crises.

behavioral ecology The field of study that focuses on how features of the environment shape personality.

behavioral genetics The study of the relationship between genetic, versus environmental, factors and personality traits.

behaviorist self-control In the behaviorist theory, the ability to exert control over the stimuli that determine our behavior.

behavior modification A form of therapy that applies the principles of reinforcement to bring about desired behavioral changes.

C

cardinal traits The most pervasive and powerful human traits which define our unique personalities.

case study A detailed history of an individual that contains data from a variety of sources.

castration anxiety A boy's fear during the Oedipal period that his penis will be cut off that represents fear of retaliation from his father.

catharsis The expression of emotions that is expected to lead to the reduction of disturbing symptoms.

cathexis An investment of psychic energy in an object or person.

central traits The handful of traits that describe a person's behavior.

classical conditioning The process by which a neutral stimulus comes to elicit a response when repeatedly paired with a stimulus that already elicited that response.

cognitive complexity A cognitive style or way of construing the environment characterized by the ability to perceive differences among people.

cognitive needs Innate needs to know and to understand.

cognitive simplicity A cognitive style or way of construing the environment characterized by a relative inability to perceive differences among people.

collective unconscious The deepest level of the psyche containing the accumulation of inherited experiences of human and prehuman species.

collectivism Perspective that emphasizes wholeness of the group, *inter*dependence, and communality, in contrast to individualism.

common traits Traits possessed in some degree by all persons.

compensation Individuals' attempts to overcome real or imagined inferiorities.

complex To Jung, a core or pattern of emotions, memories, perceptions, and wishes in the personal unconscious organized around a common theme, which drive behavior.

compliant personality Thoughts, feelings, and behaviors associated with the neurotic trend of moving toward people, such as a need for affection and approval.

conditional positive regard Approval, love, or acceptance granted only when a person expresses desirable behaviors.

conditions of worth To Rogers, a belief that we are worthy of approval only when we express desirable behaviors and attitudes and refrain from expressing those that bring disapproval from others; similar to the Freudian superego.

conflict To Horney, the basic incompatibility of the neurotic trends.

conscience A component of the superego that contains behaviors for which the child has been punished.

conscientiousness One of the five main personality traits, characterized by the tendency to be responsible, organized, and hardworking, and is opposite low conscientiousness.

conscious The part of the mind and the self that one is aware of and can control.

constitutional traits Source traits that depend on biological or physiological process, whether purely internal or affected by external factors.

construct An intellectual hypothesis that we devise and use to interpret or explain life events.

constructive alternativism The idea that we are free to revise or replace our constructs with alternatives as needed.

control group In an experiment, the group that is not exposed to the experimental condition or is exposed to a different version that is expected to have different effects.

coping behavior Consciously planned behavior determined by the needs of a given situation and designed for a specific purpose, usually to bring about a change in one's environment.

correlational method A research design and statistical technique that measures the degree of the relationship between two variables, expressed by the correlation coefficient.

creative power of the self Individuals' ability to shape their own styles of life.

crisis To Erikson, the turning point faced at each developmental stage.

D

death instincts The unconscious drive toward decay, destruction, and aggression.

defense mechanisms Strategies the ego uses to defend itself against the anxiety provoked by conflicts of everyday life. Defense mechanisms involve unconscious denials or distortions of reality.

deficit (deficiency) needs The lower needs; failure to satisfy them can harm the individual's body and well-being.

denial A defense mechanism that involves denying the existence of an external threat or traumatic event.

dependent variable In an experiment, the outcome variable the experimenter measures, typically the participants' behavior or response to manipulation of the independent variable.

detached personality Thoughts, feelings, and behaviors associated with the neurotic trend of moving away from people, such as an intense need for privacy.

disinhibition The weakening of inhibitions or constraints by observing the behavior of a model.

displacement A defense mechanism that involves shifting id impulses from a threatening object or from one that is unavailable to an object that is available.

dominant type Personality and style of life characterized by selfish and antisocial thoughts, feelings, and behaviors.

dream analysis A technique involving the interpretation of dreams to uncover unconscious conflicts.

dynamic traits Traits that describe our motivations and interests.

E

early recollections Memories from early childhood that represent contributors to people's styles of life.

ego-ideal A component of the superego that contains the moral or ideal behaviors for which a person should strive.

ego identity The self-image formed during adolescence that integrates our ideas of what we are and what we want to be.

ego To Freud, the rational aspect of the personality, responsible for directing and controlling the instincts according to the reality principle. To Jung, the conscious part of personality.

Electra complex During the phallic stage (ages 4–5), the unconscious desire of a girl for her father, accompanied by a desire to replace or destroy her mother.

encounter groups A group therapy technique in which people learn about themselves and how they relate to (or encounter) one another.

entropy principle A tendency toward balance or equilibrium within the personality; the ideal is an equal distribution of psychic energy over all structures of the personality.

environmental-mold traits Source traits that are learned from social and environmental interactions.

environmental niche An organism's immediate ecology, which shapes the adaptive value of personality traits.

epigenetic principle of maturation The idea that human development is governed by a sequence of stages that depend on genetic or hereditary factors.

equivalence principle The continuing redistribution of energy within a personality; if the energy expended on certain conditions or activities weakens or disappears, that energy is transferred elsewhere in the personality.

evolution by natural selection The process by which the heritable traits of a population change over the course of generations, in which traits that benefit survival and reproduction are passed down.

experimental group In an experiment, the group that is exposed to the experimental condition.

expressive behavior Spontaneous behavior, usually displayed without our conscious awareness, that shows our personality.

externalization A way to defend against the conflict caused by the discrepancy between an idealized and a real self-image by projecting the conflict onto the outside world.

external locus of control A belief that events in life are brought about by other people, fate, or luck.

extinction The process of eliminating a conditioned response by withholding reinforcement.

extraversion To Jung, a attitude of the psyche characterized by an orientation toward the external world and other people. According to the Five Factor and Big Five models, one of the five main personality traits, characterized by a focus on feelings, thoughts, and energy to outside of the self, especially to other people, and is opposite introversion.

F

factor analysis A statistical technique that assesses whether and to what extent multiple measurement items relate to an underlying factor such as a personality construct.

feminine psychology To Horney, a revision of psychoanalysis to encompass the psychological conflicts inherent in the traditional ideal of womanhood and women's roles.

fictional finalism Subjective beliefs that are unfounded in fact and guide our behavior as we strive toward a complete or whole state of being.

fitness Having traits that facilitate survival and reproduction.

fixation A condition in which a portion of libido remains invested in one of the psychosexual stages because of excessive frustration or gratification, such that the person cannot move to the next developmental phase.

fixed role therapy A psychotherapeutic technique in which the client acts out constructs appropriate for a fictitious person. This shows the client how the new constructs can be more effective than the old ones they had been using.

free association A technique in which the patient says whatever comes to mind. In other words, it is a kind of daydreaming out loud.

frequency-dependent selection When the prevalence of the trait within the immediate social environment shapes how advantageous or disadvantageous the trait is.

fully functioning person Rogers' term for a self-actualizing person, who has developed all facets of the self.

functional analysis An approach to the study of behavior that involves assessing the frequency of a behavior, the situation in which it occurs, and the reinforcers associated with it.

functional autonomy of motives The idea that motives in the normal, mature adult are independent of the childhood experiences in which they originally appeared.

G

getting type Personality and style of life characterized by passive and dependent thoughts, feelings, and behaviors.

growth (being) needs The higher needs; although growth needs are less necessary than deficit needs for survival, they involve the realization and fulfillment of human potential.

H

hereditary That some trait is passed down from generation to generation via genes.

heritability The proportion of variance in a trait (phenotype) that can be attributed to genetic variation.

hierarchy of needs An arrangement of five innate needs, from most basic for survival to those associated with personal growth, that activate and direct behavior.

historical determinism The view that personality is basically fixed in the early years of life and subject to little change thereafter.

holism The tenet of individual psychology that each person should be studied and appreciated for the whole of their personality.

I

idealized self-image For nonneurotic people, the self-image is an idealized picture of oneself built on a flexible, realistic assessment of one's abilities. For neurotic people, the self-image is based on an inflexible, unrealistic self-appraisal.

identity crisis The failure to achieve ego identity during adolescence.

Id To Freud, the aspect of personality allied with the instincts; the source of psychic energy, the id operates according to the pleasure principle.

incongruence A discrepancy between a person's self-concept and aspects of his or her experience.

independent variable In an experiment, the stimulus variable or condition the experimenter manipulates to learn its effect on the dependent variable.

individualism Perspective that emphasizes the individual, *inde*pendence, and relationships with other individuals, in contrast with collectivism.

individual psychology Adler's theory of personality that focuses on the uniqueness of each person.

individuation A condition of psychological health resulting from the integration of all conscious and unconscious facets of the personality, or self-fulfillment.

inferiority complex An extension of feelings of inferiority that entail feeling less capable and good than others as a result of being overwhelmed by life's demands.

inferiority feelings In Adler's theory, feelings of being helpless and not good enough that drive striving.

instinctive drift The substitution of instinctive behaviors for behaviors that had been reinforced.

instinctoid needs Maslow's term for the innate needs in his needs-hierarchy theory.

instincts In Freud's system, the basic elements of the personality, the motivating forces based on internal stimuli that drive behavior and determine its direction.

internal locus of control A belief that events in life are brought about by our own behavior.

introversion An attitude of the psyche characterized by an orientation toward one's own thoughts and feelings, according to Jung.

J

Jonah complex The fear that maximizing our potential will lead to a situation with which we will be unable to cope.

L

latency period To Freud, the period from approximately age 5 to puberty, during which the sex instinct is dormant, sublimated in school activities, sports, and hobbies, and in developing friendships with members of the same sex.

L-data Records or ratings of behaviors observed in real-life situations, such as the classroom or office.

learned helplessness A psychological pattern of lacking personal agency that results from the perception that one has no control over their environment.

libido To Freud, the form of psychic energy, manifested by the life instincts, that drives a person toward pleasurable behaviors and thoughts. To Jung, a broader and more generalized form of psychic energy.

life-history reconstruction Jung's type of case study that involves examining a person's life experiences to identify developmental patterns that may explain present neuroses.

life history theory Posits that variation in reproductive and related traits result from adaptive calibration to environmental challenges and because organisms have limited resources and must make trade-offs.

life instincts The drive for ensuring survival of the individual and the species by satisfying the needs for food, water, air, and sex.

M

maldevelopment A condition that occurs when the ego consists solely of a single way of coping with conflict.

metamotivation The motivation of self-actualizers, which involves maximizing personal potential rather than striving for a particular goal object.

metaneeds States of growth or being (personality traits and virtues) toward which self-actualizers develop.

metapathology A thwarting of self-development related to failure to satisfy the metaneeds.

modeling A process of learning by which an individual observes another person engage in a behavior and then copies that behavior.

moral anxiety Negative affect arising from conflict between id and superego.

Myers-Briggs Type Indicator (MBTI) An assessment test based on Jung's psychological types and the attitudes of introversion and extraversion that is widely used but not very valid or reliable.

N

negative reinforcement The strengthening of a response by the removal of an aversive stimulus.

neurotic anxiety Anxiety that involves a conflict between id and ego.

neurotic competitiveness An indiscriminate need to win at all costs.

neuroticism One of the five main personality traits, characterized by chronic emotional instability and tendency to experience psychological distress, and is opposite emotional stability.

neurotic needs Ten irrational defenses against anxiety that can become a permanent part of personality and that affect behavior.

neurotic trends Three categories of personality profiles express a person's needs; Horney's revision of the concept of neurotic needs.

O

objective Measures that are impartial and have standardized quantifiable outcomes that allow for direct comparison across results.

observational learning Learning new behaviors by observing the behavior of other people.

Oedipus complex During the phallic stage (ages 4–5), the unconscious desire of a boy for his mother, accompanied by a desire to replace or destroy his father.

openness to experience One of the five main personality traits, characterized by a desire and tendency to experience novel stimuli, including cultural, intellectual, and aesthetic. The opposite is low in openness.

operant behavior Behavior emitted spontaneously or voluntarily that operates on the environment to change it.

operant conditioning The process by which an emitted behavior operates on the environment to change it, and the consequence reinforces the behavior.

opposition principle Jung's idea that conflict between opposing processes or tendencies is necessary to generate psychic energy.

optimistic explanatory style Characterized by the expectation that good things will happen and can buffer against learned helplessness.

organismic valuing process The process by which we judge experiences in terms of their value for fostering or hindering our actualization and growth.

P

peak experience A moment of intense ecstasy, similar to a religious or mystical experience, during which the self is transcended.

penis envy The envy the female feels toward the male because the male possesses a penis; this is accompanied by a sense of loss because the female does not have a penis.

permeability The idea that constructs can be revised and extended in light of new experiences.

perseverative functional autonomy The level of functional autonomy that relates to low-level and routine behaviors.

persona archetype The public face or role a person presents to others.

personal construct theory Kelly's description of personality in terms of cognitive processes: We interpret behaviors and events and use this understanding to guide our behavior and to predict the behavior of other people.

personal dispositions Traits that are peculiar to an individual, as opposed to traits shared by a number of people.

personal-document technique The personal-document technique involves the study of a person's written or spoken records.

personality The unique, relatively enduring internal and external aspects of a person's character manifest in patterns of thoughts, feelings, and behaviors that influence behavior in different situations.

personality trade-offs Costs and benefits of specific traits, which largely depend on the environment.

personal unconscious The reservoir of material that was once conscious but has been forgotten or suppressed.

person-centered therapy Rogers' approach to therapy in which the client is assumed to be responsible for changing their personality.

pessimistic explanatory style Characterized by the expectation that bad things will happen and can spread learned helplessness to all facets of life.

play constructions A personality assessment technique by Erikson for children in which structures assembled from dolls, blocks, and other toys are analyzed.

pleasure principle The principle by which the id functions to avoid pain and maximize pleasure.

positive regard Acceptance, love, and approval from others.

positive self-regard The condition under which we grant ourselves acceptance and approval.

primal emotions Evolutionarily old positive (seeking, lust, care, play) and negative (fear, anger, sadness) feelings that are theorized to give rise to the five factors of personality.

primary-process thought Childlike thinking by which the id attempts to satisfy the instinctual drives.

projection A defense mechanism that involves attributing a problematic impulse to someone else.

projective test A type of personality measure that gives respondents the opportunity to project personal needs, fears, and values onto their interpretation or description of an ambiguous stimulus.

propriate functional autonomy The level of functional autonomy that relates to our values, self-image, and lifestyle.

proprium Allport's term for the ego or self.

psyche Jung's term for personality.

psychoanalysis Sigmund Freud's theory of personality and system of therapy for treating mental disorders

psychohistorical analysis The application of Erikson's life-span theory, along with psychoanalytic principles, to the study of historical figures.

psychological types To Jung, eight personality types based on interactions of the attitudes (introversion and extraversion) and the functions (thinking, feeling, sensing, and intuiting).

psychosexual stages of development To Freud, the oral, anal, phallic, and genital stages through which all children pass. In these stages, gratification of the id instincts depends on the stimulation of corresponding areas of the body.

psychosocial stages To Erikson, eight successive stages encompassing development across the life span. At each stage, we cope with a crisis in either an adaptive or a maladaptive way.

punishment The application of an aversive stimulus following a response in an effort to decrease the likelihood that the response will recur.

Q

Q-data Self-report questionnaire ratings of our characteristics, attitudes, and interests.

Q-sort technique A self-report technique for assessing aspects of the self-concept.

qualitative Measures that gather data usually in the form of words and descriptions that can be coded for content, themes, and styles of thinking.

quantitative Methods that collect data in the form of numbers that can be compared and analyzed via statistical analyses.

R

range of convenience The spectrum of people and situations to which a construct can be applied. Some constructs have limited applicability; other constructs are broader.

rationalization A defense mechanism that involves reinterpreting the situation to make it more acceptable and less threatening to us.

reaction formation A defense mechanism that involves expressing an id impulse that is the opposite of the one that is truly driving the person.

reality anxiety A fear of tangible dangers.

reality principle The principle by which the ego functions to provide appropriate constraints on the expression of the id instincts.

reciprocal determinism The idea that behavior is controlled or determined by the individual, through cognitive processes, and by the environment, through external stimuli.

regression A defense mechanism that involves retreating to an earlier, less frustrating period of life and displaying the usually childish behaviors characteristic of that more secure time.

reinforcement schedules Patterns or rates of providing or withholding reinforcers.

reinforcement The act of strengthening a response by adding a reward, thus increasing the likelihood that the response will be repeated.

reliability The consistency of response to a psychological measure or assessment.

repression A defense mechanism that involves unconscious denial of the existence of something that causes anxiety.

resistance In free association, a blockage or refusal to disclose painful memories.

respondent behavior Responses automatically made to or elicited by specific environmental stimuli.

romantic and sexual partner choice Selection pressure over evolutionary time that contributed to why the specific traits that dominate our personality profiles emerged; those traits helped romantic and sexual partners survive and reproduce.

S

safety need A child's need for security and freedom from fear.

secondary-process thought Mature thought processes needed to deal rationally with the external world.

secondary traits The least important traits that a person may display inconspicuously and inconsistently.

self-actualization The highest need in Maslow's model, the fullest development of the self.

self archetype To Jung, the archetype that represents the unity, integration, and harmony of the total personality.

self-characterization sketch A technique to assess a person's construct system by having them write a detailed description of themselves as if it were written by a friend.

self-control The ability to adjust one's feelings, thoughts, and behaviors to be consistent with one's goals.

self-efficacy Our feeling of adequacy, efficiency, and competence in coping with life.

self-esteem The extent to which one has a positive self-concept.

self-regulation Various strategies people employ to control their behaviors to be consistent with their goals.

self-reinforcement Administering rewards or punishments to oneself for meeting, exceeding, or falling short of one's own expectations or standards.

self-report measure A personality assessment technique in which respondents answer questions about themselves.

sensation seeking The need for varied, novel, and complex sensations and experiences.

shadow archetype The dark side of the personality; the archetype that contains primitive animal instincts.

social interest Each individual's innate potential to cooperate with other people in order to achieve personal and societal goals.

socially useful type Personality and style of life characterized by considerate, cooperative, and careful thoughts, feelings, and behaviors.

social partner choice A reason why over evolutionary time the specific traits that dominate our personality profiles emerged; those traits helped social partners (e.g., friends, teammates) survive and reproduce.

source traits Stable and permanent traits that are the basic factors of personality, derived by the method of factor analysis.

striving for superiority The universal tendency for individuals to seek to be their best selves.

style of life Personality and social patterns that reflect individuals' unique approaches to striving for superiority.

subjective Measures that are not impartial and do not have standardized quantifiable outcomes that allow for direct comparison across results.

sublimation A defense mechanism that involves altering or displacing id impulses by diverting instinctual energy into socially acceptable behaviors.

subliminal perception Perception below the threshold of conscious awareness.

successive approximation A series of rewards given to positively reinforce incremental behavior changes as they become closer and closer to the desired behavior; one way by which complex behaviors are learned.

success of the individual One reason why over evolutionary time the specific traits that dominate our personality profiles emerged; those traits helped individuals survive and reproduce.

superego To Freud, the moral aspect of personality; the internalization of parental and societal values and standards.

superiority complex One potential response to feelings of inferiority that entails an overcompensating unrealistically positive perception of one's own abilities and accomplishments.

superstitious behavior Persistent behavior that has a coincidental and not a functional relationship to the reinforcement received.

surface traits Traits that show a correlation but do not constitute a factor because they are not determined by a single source.

symptom analysis Similar to catharsis, the symptom analysis technique focuses on the symptoms reported by the patient and attempts to interpret the patients' free associations to those symptoms.

T

T-data Data derived from personality tests that are resistant to deliberately biased responding.

temperament traits Traits that describe our general behavioral style in responding to our environment.

token economy A behavior-modification technique in which tokens, which can be exchanged for valued objects or privileges, are awarded for desirable behaviors.

traits To Allport, distinguishing characteristics that guide behavior. Traits are measured on a continuum and are subject to social, environmental, and cultural influences. To Cattell, reaction tendencies that are relatively permanent parts of the personality.

tyranny of the shoulds An attempt to realize an unattainable idealized self-image by denying the true self and behaving in terms of what we think we should be doing.

U

unconditional positive regard Approval granted regardless of a person's behavior. In Rogers' person-centered therapy, the therapist offers the client unconditional positive regard.

unconscious The part of the mind and the self that one is not aware of but that drives behavior.

unique traits Traits that few people possess and make us unique.

universal problems Challenges all people face in life, having to do with social interactions, occupation, and love.

V

validity The extent to which a measure or assessment captures what it is intended to capture.

vicarious reinforcement Learning or changing a behavior by observing the consequences of the behaviors of others, rather than experiencing the reinforcement directly.

W

whole trait theory Posits that traits are made up of an internal aspect that causes behaviors (*explanation*) and the distribution of behaviors that correspond to those traits across time and situations (*description*).

womb envy The envy a male feels toward a female because she can bear children and he cannot. Womb envy was Horney's response to Freud's concept of penis envy in females.

word-association test A projective technique in which a person responds to a stimulus word with whatever word comes to mind.

References

Aarts, J., Deckx, L., Abbema, D., Tjan-Heijnen, V., Akker, M., & Buntinx, F. (2015, January 25). The relation between depression, coping and health locus of control: Differences between older and younger patients, with and without cancer. *Psycho-Oncology.* http://onlinelibrary.wiley.com/doi/10.1002/pon.3748/abstract

Abdel-Khalek, A. (2012). Personality and mental health: Arabic scale of mental health: Eysenck personality questionnaire, and NEO five factor inventory. *Psychological Reports, 111,* 75–82.

Abdel-Khalek, A., & Lester, D. (2010). Personal and psychological correlates of happiness among a sample of Kuwaiti Muslim students. *Journal of Muslim Mental Health, 5*(2), 194–209.

Abdel-Khalek, A. M., & Lester, D. (2017). The association between religiosity, generalized self-efficacy, mental health, and happiness in Arab college students. *Personality and Individual Differences*, *109*, 12–16.

Abdulaeva, E. A., & Smirnova, E. O. (2021). Formation of a spatial self-image at an early age. *New Ideas in Child and Educational Psychology*, *1*(1), 24–42.

Abe, H., Imai, S., & Nedate, L. (2011). Effects of fixed-role therapy applying decision-making theory on social anxiety. *Japanese Journal of Counseling Science, 44,* 1–9.

Abma, R. (2004). Madness and mental health. In J. Janz & P. Van Drunen (Eds.), *A social history of psychology* (pp. 93–128). Malden, MA: Blackwell.

Abrams, J. A., Javier, S. J., Maxwell, M. L., Belgrave, F. Z., & Nguyen, A. B. (2016). Distant but relative: Similarities and differences in gender role beliefs among African American and Vietnamese American women. *Cultural Diversity and Ethnic Minority Psychology*, *22*(2), 256.

Abramson, C. I., & Kieson, E. (2016). Conditioning methods for animals in agriculture: A review. *Ciência Animal Brasileira*, *17*, 359–375.

Abravanel, E., Levan-Goldschmidt, E., & Stevenson, M. B. (1976). Action imitation: The early phase of infancy. *Child Development, 47,* 1032–1044.

Achat, H., Kawachi, I., Spiro, A., DeMolles, D. A., & Sparrow, D. (2000). Optimism and depression as predictors of physical and mental health functioning: The normative aging study. *Annals of Behavioral Medicine*, *22*(2), 127–130.

Ackerman, S. J., Benjamin, L. S., Beutler, L. E., Gelso, C. J., Goldfried, M. R., Hill, C., . . . Rainer, J. (2001). Empirically supported therapy relationships: Conclusions and recommendations of the Division 29 Task Force. *Psychotherapy, 38*(4), 495–497.

Adamczyk, K., Park, J. Y., & Segrin, C. (2022). Patterns of intimacy crisis resolution and their associations with romantic loneliness in Polish and US young adults. *Developmental Psychology*, *58*(8), 1600.

Adamkovič, M., & Martončik, M. (2017). A review of consequences of poverty on economic decision-making: A hypothesized model of a cognitive mechanism. *Frontiers in Psychology*, *8*, 1784.

Adams, D. (1954). *The anatomy of personality*. Doubleday.

Adams, G. R., & Fitch, S. A. (1982). Ego stage and identity status development: A cross-sequential analysis. *Journal of Personality and Social Psychology, 43,* 574–583.

Adams, H. M., Luevano, V. X., & Jonason, P. K. (2014). Risky business: Willingness to be caught in an extra-pair relationship, relationship experience, and the Dark Triad. *Personality and Individual Differences, 66*, 204–207.

Adams, N. (2012). Skinner's *Walden Two:* An anticipation of positive psychology? *Review of General Psychology, 16,* 1–9.

Adams-Webber, J. R. (2001). Cognitive complexity and role relationships. *Journal of Constructivist Psychology, 14*(1), 43–50.

Adebimpe, O., & Oladimeji, B. (2014). Health beliefs and locus of control as predictors of cancer screening behavior among women in Obafemi Awolowo University community. *Gender & Behavior, 12,* 6457–6464.

Adler, A. (1924). *The practice and theory of individual psychology*. Littlefield Adams.

Adler, A. (1930). Individual psychology. In C. Murchison (Ed.), *Psychologies of 1930* (pp. 395–405). Clark University Press.

Adler, A. (1933). Advantages and disadvantages of the inferiority feeling. *Superiority and Social Interest*, 50–58.

Adler, A. (1939). *Social interest: A challenge to mankind.* J. Linton & R. Vaughan (Trans.). Putnam. (Original work published 1933).

Adler, A. (1963). *The practice and theory of individual psychology*. P. Radin (Trans.). Littlefield, Adams. (Original work published 1924).

Adler, J. (2006, March 27). Freud in our midst. *Newsweek,* pp. 43–49.

Agbaria, Q., & Mokh, A. A. (2022). Coping with stress during the coronavirus outbreak: The contribution of Big Five personality traits and social support. *International Journal of Mental Health and Addiction*, *20*(3), 1854–1872.

Aghababaei, N. (2012). Religious, honest and humble: Looking for the religious person within the HEXACO model of personality structure. *Personality and Individual Differences, 53,* 880–883.

Aghababaei, N., & Arji, A. (2014). Well-being and the HEXACO model of personality. *Personality and Individual Differences, 56,* 139–142.

Ahern, J., Cerda, M., Lippnnan, S., Tardiff, K., Vlahov, D., & Galea, S. (2013). Navigating non-positivity in neighbourhood studies: An analysis of collective efficacy and violence. *Journal of Epidemiology and Community Health, 67,* 159–165.

Ahlin, E., & Lobo Antunes, M. (2015, January 24). Locus of control orientation: Parents, peers, and place. *Journal of Youth and Adolescence*. http://psycnet .apa.org/index.cfm? fa=main.doiEventRedirect &uid=&pc=&nextURL=http% 3A%2F%2Fdx%2Edoi %2Eorg%2F10%2E1007%2Fs10964% 252D015 %252D0253%252D9

Ahn, H. S., Usher, E. L., Butz, A., & Bong, M. (2016). Cultural differences in the understanding of modelling and feedback as sources of self-efficacy information. *British Journal of Educational Psychology*, *86*(1), 112–136.

Ahn, J. N., Hu, D., & Vega, M. (2020). "Do as I do, not as I say": Using social learning theory to unpack the impact of role models on students' outcomes in education. *Social and Personality Psychology Compass*, *14*(2), e12517.

Akdogan, R., Aydın, M., & Eken, H. (2018). Understanding the Contribution of Abnormal Inferiority Feelings on Insecure Attachment Through Gender and Culture: A Study of University Students Seeking Psychological Support. *The Journal of Individual Psychology, 74*(1), 96–116. https://doi.org/10.1353/jip.2018.0006

Aksu, A. A., Şekercioğlu, G., Ehtiyar, V. R., Yıldız, S., & Yılmaz, Y. (2010). The relationship between personality, gender and departments: Application of 16 personality factor questionnaire in the Antalya region of Turkey. *Quality & Quantity*, *44*, 1113–1127.

Alansari, B., & Kazem, A. (2008). Optimism and pessimism in Kuwaiti and Omani undergraduates. *Social Behavior and Personality, 36*(4), 503–518.

Alansari, B. M. (2006). Gender differences in anxiety among undergraduates from 16 Islamic countries. *Social Behavior and Personality, 34,* 651–660.

Albornoz-Arias, N., Mazuera-Arias, R., Carreño-Paredes, M. T., Vivas-García, M., Cuberos, M. A., Ramírez-Martínez, C., . . . & Bermúdez, V. (2019). Influencia de la educación sexual en la maternidad adolescente en el Departamento Norte de Santander, Colombia. *Archivos Venezolanos de Farmacología y Terapéutica*, *38*(1), 82.

Albright, L., Malloy, T. E., Dong, Q., Kenny, D. A., Fang, X., Winquist, L., & Yu, D. (1997). Cross-cultural consensus in personality judgments. *Journal of Personality and Social Psychology, 72,* 558–569.

Aldarabah, I. T., Almohtadi, R., Jwaifell, M., & Dib, F. (2019). Parental upbringing styles and their relationship with social withdrawal among a sample of kindergarten children: The forgotten victim. *Child Maltreatment*, *10*(18).

Ale, C., Chorney, D., Brice, C., & Morris, T. (2010). Facial affect recognition and social anxiety in preschool children. *Early Child Development and Care, 180*(10), 1349–1359.

Alessandri, G., Perinelli, E., De Longis, E., Schaufeli, W. B., Theodorou, A., Borgogni, L., Caprara, G. V., & Cinque, L. (2018). Job burnout: The contribution of emotional stability and emotional self-efficacy beliefs. *Journal of Occupational and Organizational Psychology*, *91*(4), 823–851.

Alessandri, G., Vecchione, M., Caprara, G., & Letzring, T. (2012). The Ego Resiliency Scale revised: A crosscultural study in Italy, Spain and the United States. *European Journal of Psychological Assessment, 28,* 139–146.

Alexandre, P., Martins, S., Silvia, S., & Richard, P. (2009). Disparities in adequate mental health care for the past-year major depressive episodes among Caucasian and Hispanic youth. *Psychiatric Services, 60*(10), 1365–1371.

Alfonso, R., Bueno, B., Loureiro, B., & Pereira, H. (2011). Reminiscence, psychological well-being, and ego integrity in Portuguese elderly people. *Educational Gerontology, 37,* 1063–1080.

Alizadeh, H., Ferguson, E. D., Murphy, J. M., & Soheili, F. (2017). Development of the Social Interest Scale for Iranian children aged 4–12. *The Journal of Individual Psychology, 73*(1), 38–53.

Alizadeh, H., Walton, F. X., & Soheili, F. (2016). Social interest in children with and without attention-deficit/ hyperactivity disorder. *The Journal of Individual Psychology, 72*(4), 290–307.

Allan, B. A., Duffy, R. D., & Douglass, R. (2015). Meaning in life and work: A developmental perspective. *The Journal of Positive Psychology*, *10*(4), 323–331.

Allemand, M., Job, V., & Mroczek, D. K. (2019). Self-control development in adolescence predicts love and work in adulthood. *Journal of Personality and Social Psychology*, *117*(3), 621.

Allemand, M., Zimprich, D., & Hendriks, A. (2008). Age differences in five personality domains across the life span. *Developmental Psychology, 44*(3), 758–770.

Allemand, M., Zimprich, D., & Hertzog, C. (2007). Crosssectional age differences and longitudinal age changes of personality in middle adulthood and old age. *Journal of Personality, 75,* 323–328.

Allemand, M., Zimprich, D., & Martin, M. (2008). Long-term correlated change in personality traits in old age. *Psychology and Aging, 23*(3), 545–557.

Allen, J., & Dana, R. (2004). Methodological issues in cross-cultural and multicultural Rorschach research. *Journal of Personality Assessment, 82,* 189–206.

Allik, J., & McCrae, R. (2004). Toward a geography of personality traits: Patterns of profiles across 36 cultures. *Journal of Cross-Cultural Psychology, 35,* 13–28.

Allik, J., Realo, A., & McCrae, R. (2013). Universality of the five-factor model of personality. In T. Widiger (Ed.), *Personality disorders and the five-factor model* (pp. 61–74). American Psychological Association.

Allik, J., Realo, A., Mottus, R., Borkenau, P., Kuppens, P., & Hrebickova, M. (2010). How people see others is different from how people see themselves: A replicable pattern across cultures. *Journal of Personality and Social Psychology, 99*(5), 870–882.

Allik, J., Realo, A., Mottus, R., Pullmann, H., Trifonova, A., & McCrae, R. (2009). Personality traits of Russians from the observer's perspective. *European Journal of Personality, 23*(7), 567–588.

Allport, G. W. (1937). *Personality: A psychological interpretation*. Holt.

Allport, G. W. (1955). *Becoming: Basic considerations for a psychology of personality*. Yale University Press.

Allport, G. W. (1961). *Pattern and growth in personality*. Holt.

Allport, G. W. (1966). Traits revisited. *American Psychologist, 21,* 1–10.

Allport, G. W. (1967). Autobiography. In E. G. Boring & G. Lindzey (Eds.), *A history of psychology in autobiography* (Vol. 5, pp. 1–25). Appleton-Century-Crofts.

Allport, G. W., & Cantril, H. (1934). Judging personality from voice. *Journal of Social Psychology, 5,* 37–55.

Allport, G. W., Clark, K., & Pettigrew, T. (1954). The nature of prejudice.

Allport, G. W. (Ed.). (1965). *Letters from Jenny*. Harcourt, Brace & World.

Allport, G. W., & Kramer, B. M. (1946). Some roots of prejudice. *The Journal of Psychology*, *22*(1), 9–39.

Allport, G. W., & Vernon, P. (1933). *Studies in expressive movement*. Macmillan.

Allport, G. W., Vernon, P. E., & Lindzey, G. (1960). *A study of values: A scale for measuring the dominant interests in personality* (3rd ed.). Houghton-Mifflin.

Al-Masry, A. R. (2022). Suicidal tendencies as a mediating variable in the relationship between future anxiety and learned helplessness among university students. *Journal of Positive School Psychology*, *6*(8), 3694–3710.

Almquist, E. M., & Angrist, S. S. (1971). Role model influences on college women's career aspirations. *Merrill-Palmer Quarterly of Behavior and Development*, *17*(3), 263–279.

Alsaidi, S., Velez, B. L., Smith, L., Jacob, A., & Salem, N. (2021). "Arab, brown, and other": Voices of Muslim Arab American women on identity, discrimination, and well-being. *Cultural Diversity and Ethnic Minority Psychology*.

Altmaier, E. M., Russell, D. W., Kao, C. F., Lehmann, T. R., & Weinstein, J. N. (1993). Role of self-efficacy in rehabilitation outcome among chronic low back pain patients. *Journal of Counseling Psychology, 40*(3), 335.

Altus, D., & Morris, E. (2009). B. F. Skinner's utopian vision: Behind and beyond *Walden Two*. *Behavior Analyst, 32*(2)*,* 319–335.

Aluja, A., Garcia, L. F., Rossier, J., Ostendorf, F., Glicksohn, J., Oumar, B., Bellaj, T., Ruch, W., Wang, W., Suranyi, Z., Ścigała, D., Čekrlija, D., Stivers, A. W., DI Blas, L., Valdivia, M., Ben Jemaa, S., Atitsogbe, K. A., & Hansenne, M. (2022). Dark Triad traits, social position, and personality: A cross-cultural study. *Journal of Cross-Cultural Psychology*, *53*(3–4), 380–402. https://doi.org/10.1177/00220221211072

Ambody, N., & Rosenthal, R. (1992). Thin slices of expressive behavior as predictors of interpersonal consequences: A meta-analysis. *Psychological Bulletin, 111,* 256–274.

Amichai-Hamburger, Y., & Vinitzky, G. (2010). Social network use and personality. *Computers in Human Behavior, 26*(6)*,* 1289–1295.

Amirkhan, J. H., Risinger, R. T., & Swickert, R. J. (1995). Extraversion: A "hidden" personality factor in coping? *Journal of Personality, 63,* 189–212.

Amram, Y., & Benbenishty, R. (2014). The impact of therapeutic factors on locus of control of addicts in therapeutic communities. *Journal of Groups in Addiction Recovery, 9,* 313–325.

Anderson, C., John, O., Keltner, D., & Kring, A. (2001). Who attains social status? Effects of personality and physical attractiveness in social groups. *Journal of Personality and Social Psychology, 81,* 116–132.

Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., Rothstein, H. R., & Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries: A meta-analytic review. *Psychological Bulletin, 136*(2), 151–173.

Anderson, D. C., & Friedman, L. J. (1997). Erik Erikson on revolutionary leadership [Retrospective review of four books by Erikson]. *Contemporary Psychology, 42,* 1063–1067.

Anderson, J. W. (1990). The life of Henry A. Murray: 1893–1988. In A. I. Rabin, R. A. Zucker, R. A. Emmons, & S. Frank (Eds.), *Studying persons and lives* (pp. 304–334). Springer.

Anderson, S., Adams, G., & Plaut, V. (2008). The cultural grounding of personal relationships: The importance of attractiveness in everyday life. *Journal of Personality and Social Psychology, 95*(2), 352–368.

Andreassen, C., Griffiths, M., Gjertsen, S., Krossbakken, E., Kvam, S., & Pallesen, S. (2013). The relationships between behavioral addictions and the five-factor model of personality. *Journal of Behavioral Addictions, 2,* 90–99.

Andrieux, M., & Proteau, L. (2016). Observational learning: Tell beginners what they are about to watch and they will learn better. *Frontiers in Psychology*, *7*, 51.

Androutsopoulou, A. (2001). The self-characterization as a narrative tool: Applications in therapy with individuals and families. *Family Process*, *40*(1), 79–94.

Ang, C. S., & Liang, C. (2021). Social influence in Malaysia and Singapore: Interrelationships between cultural orientation, social group identity, coping style, and social conformity. *Psychological Thought*, *14*(1).

Ang, R. (2006). Effects of parenting style on personal and social variables for Asian adolescents. *American Journal of Orthopsychiatry, 76,* 503–511.

Anthis, K., & LaVoie, J. (2006). Readiness to change: A longitudinal study of changes in adult identity. *Journal of Research in Personality, 40,* 209–219.

Apostal, R. A. (1991). College students' career interests and sensing-intuition personality. *Journal of College Student Development, 32,* 4–7.

Appignanesi, L., & Forrester, J. (1992). *Freud's women*. New York: Basic Books.

Arbisi, P., Ben-Porath, Y., & McNulty, J. (2002). A comparison of MMPI-2 validity in African-American and Caucasian psychiatric inpatients. *Psychological Assessment, 14*(1), 3–15.

Arbona, C. (2016). Ethnic minority status stress, self-efficacy, and persistence intentions among Hispanic college women: A moderation analysis. *Journal of Psychology and Behavioral Science*, *4*(1), 11–22.

Archer, S. L. (1982). The lower age boundaries of identity development. *Child Development, 53,* 1551–1556.

Ardelt, M., Gerlach, K. R., & Vaillant, G. E. (2018). Early and midlife predictors of wisdom and subjective well-being in old age. *The Journals of Gerontology: Series B*, *73*(8), 1514–1525.

Arican, C., Bulk, J., Deisig, N., & Nawrot, M. P. (2020). Cockroaches show individuality in learning and memory during classical and operant conditioning. *Frontiers in Physiology*, *10*, 1539.

Ariso, J., & Reyero, D. (2014). Reconsidering the scenario of cyberbullying: Promoting the internalization of the locus of control in adolescents through cognitive restructuring. *Adolescent Psychiatry, 4,* 98–103.

Armstrong, A., & Dienes, Z. (2014). Subliminal understanding of active versus passive sentences. *Psychology of Consciousness: Theory, Research, and Practice, 1*(1), 32–50.

Arnocky, S., Piché, T., Albert, G., Ouellette, D., & Barclay, P. (2017). Altruism predicts mating success in humans. *British Journal of Psychology*, *108*(2), 416–435. https://doi.org/10.1111/bjop.12208

Arnold, E. (2005). A voice of their own: Women moving into their fifties. *Health Care for Women International, 26,* 630–651.

Arokach, A. (2006). Alienation and domestic abuse: How abused women cope with loneliness. *Social Indicators Research, 78*(2), 327–340.

Arpaci I., Baloğlu, M., & Kesici, Ş. (2018). The relationship among individual differences in individualism-collectivism, extraversion, and self-presentation. *Personality and Individual Differences*, *121*, 89–92.

Asanjarani, F., Aghaei, K., Fazaeli, T., Vaezi, A., & Szczygieł, M. (2022). A structural equation modeling of the relationships between parenting styles, students' personality traits, and students' achievement goal orientation. *Frontiers in Psychology*, *12*, 805308.

Asberg, K., & Renk, K. (2014). Perceived stress, external locus of control, and social support as predictors of psychological adjustment among female inmates with or without a history of sexual abuse. *International Journal of Offender Therapy & Comparative Criminology, 58,* 59–84.

Asendorpf, J. B., & Wilpers, S. (1998). Personality effects on social relationships. *Journal of Personality and Social Psychology, 74,* 1531–1544.

Ashton, M. C., & Lee, K. (2001). A theoretical basis for the major dimensions of personality. *European Journal of Personality, 15,* 327–333.

Ashton, M. C., & Lee, K. (2002). Six independent factors of personality variation. *European Journal of Personality, 16,* 63–75.

Ashton, M. C., & Lee, K. (2007). Empirical, theoretical, and practical advantages of the HEXACO model of personality structure. *Personality and Social Psychology Review, 11*(2), 150–166.

Ashton, M. C., & Lee, K. (2008). The HEXACO model of personality structure. In G. Boyle, G. Matthews, & D. Saklofske (Eds.), *The SAGE handbook of personality theory and assessment: Vol. 2. Personality measurement and testing* (pp. 239–260). Sage Publications.

Ashton, M. C., & Lee, K. (2009). The HEXACO-60: A short measure of the major dimensions of personality. *Journal of Personality Assessment, 91*(4), 340–345.

Ashton, M. C., Lee, K., de Vries, R. E., Perugini, M., Gnisci, A., & Sergi, I. (2006). The HEXACO model of personality structure and indigenous lexical personality dimensions in Italian, Dutch, and English. *Journal of Research in Personality, 40*(6), 851–875.

Ashton, M. C., Lee, K., Perugini, M., Szarota, P., de Vries, R. E., Di Blas, L., Boies, K., & De Raad, B. (2004). A six-factor structure of personality-descriptive adjectives: Solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology, 86,* 356–366.

Ashton, M. C., Lee, K., & Paunonen, S. (2002). What is the central feature of extraversion? Social attention versus reward sensitivity. *Journal of Personality and Social Psychology, 83,* 245–252.

Aspinwall, L., & Tedeschi, R. (2010). The value of positive psychology for health psychology: Progress and pitfalls in examining the relation of positive phenomena to health. *Annals of Behavioral Medicine, 39,* 4–15.

Assor, A., Roth, G., & Deci, E. (2004). The emotional costs of parents' conditional regard: A self-determination theory analysis. *Journal of Personality, 72,* 47–87.

Assor, A., & Tai, K. (2012). When parents affection depends on child's achievement: Parental conditional positive regard, self-aggrandizement, shame and coping in adolescents. *Journal of Adolescence, 36,* 249–260.

Atay, S. (2012). The standardization of the Myers-Briggs Type Indicator into Turkish: An application on students. *Journal of Instructional Psychology, 39,* 74–79.

Atherton, O. E., Grijalva, E., Roberts, B. W., & Robins, R. W. (2021). Stability and change in personality traits and major life goals from college to midlife. *Personality and Social Psychology Bulletin*, *47*(5), 841–858.

Atherton, O. E., Sutin, A. R., Terracciano, A., & Robins, R. W. (2022). Stability and change in the Big Five personality traits: Findings from a longitudinal study of Mexican-origin adults. *Journal of Personality and Social Psychology*, *122*(2), 337–350. https://doi.org/10.1037/pspp0000385.supp

Atkinson, J. W., Lens, W., & O'Malley, P. M. (1976). Motivation and ability: Interactive psychological determinants of intellectual performance, educational achievement, and each other. In W. H. Sewell, R. H. Hanser, & D. L. Featherman (Eds.), *Schooling and achievement in American society*. Academic Press.

Attari, B., Monirpour, N., & Hajeb, M. Z. (2018). Explaining happiness in the elderly on the basis of self-acceptance,

appreciation and forgiveness with the mediating role of self-empowerment. *Aging Psychology*, *4*(3), 197–211.

Aulbach, M. B., Harjunen, V. J., & Spapé, M. (2023). Visible skin disease symptoms of another person reduce automatic imitation of their hand movements. *Psychological Research*, *87*(5), 1466–1474.

Ayllon, T., & Azrin, N. (1968). *The token economy*. Appleton-Century-Crofts.

Ayoubui, R., & Ustwani, B. (2014). The relationship between students' MBTI preferences and academic performance at a Syrian university. *Education & Training, 56,* 78–90.

Azar, B. (2010). Your brain on culture: The burgeoning field of cultural neuroscience is finding that culture influences brain development, and perhaps vice versa. *Monitor on Psychology, 41*(10), 44–47.

Azizli, N., Atkinson, B. E., Baughman, H. M., & Giammarco, E. A. (2015). Relationships between general self-efficacy, planning for the future, and life satisfaction. *Personality and Individual Differences*, *82*, 58–60.

Baars, B. J. (1986). *The cognitive revolution in psychology*. Guilford Press.

Bacanli, F. (2006). Personality characteristics as predictors of personal indecisiveness. *Journal of Career Development, 32,* 320–332.

Back, M., Schmukle, S., & Egloff, B. (2006). Who is late and who is early? Big Five personality factors and punctuality in attending psychological experiments. *Journal of Research in Personality, 40,* 841–848.

Back, M., Stopfer, J., Vazire, S., Gaddiss, S., Schmuckle, S., Egloff, B., & Gosling, S. D. (2010). Facebook profiles reflect actual personality, not self-idealization. *Psychological Science, 21*(3), 372–374.

Bacon, A., Burak, H., & Rann, J. (2014). Sex differences in the relationship between sensation seeking, trait emotional intelligence and delinquent behavior. *Journal of Forensic Psychiatry & Psychology, 25,* 673–683.

Badcock, P. B., Moore, E., Williamson, E., Berk, M., Williams, L. J., Bjerkeset, O., Nordahl, H. M., Patton, G. C., & Olsson, C. A. (2011). Modeling gene-environment interaction in longitudinal data: Risk for neuroticism due to interaction between maternal care and the dopamine 4 receptor gene (DRD4). *Australian Journal of Psychology*, *63*(1), 18–25. https://doi.org/10.1111/j.1742-9536.2011.00003.x

Badger, J., & Reddy, P. (2009). The effects of birth order on personality traits and feelings of academic sibling rivalry. *Psychology Teaching Review, 15,* 45–54.

Baek, Y., Bae, Y., & Jang, H. (2013). Social and parasocial relationships on social network sites and their differential relationships with users' psychological well-being. *Cyberpsychology: Behavior and Social Networking, 16*(7), 512–517.

Bai, Y., Chiou, C., & Chang, Y. (2009). Self-care behavior and related factors in older people with type 2 diabetes. *Journal of Clinical Nursing*, *18*(23), 3308–3315.

Bair, D. (2003). *Jung: A biography*. Little Brown.

Bakalar, N. (2011, October 11). First mention: Sigmund Freud, 1909. *New York Times*.

Bakracheva, M. (2020). The meanings ascribed to happiness, life satisfaction and flourishing. *Psychology*, *11*(1), 87–104. https://doi.org/10.4236/psych.2020.111007

Baldwin, D. A., Baird, J. A., Saylor, M. M., & Clark, M. A. (2001). Infants parse dynamic action. *Child Development*, *72*(3), 708–717.

Balistreri, E., Busch-Rossnagel, N. A., & Geisinger, K. F. (1995). Development and preliminary validation of the Ego Identity Process Questionnaire. *Journal of Adolescence, 18,* 179–182.

Balz, G. S. (1996). *Identification with gender roles: A personal construct psychology perspective* (thesis). https://scholar.uwindsor.ca/cgi/viewcontent.cgi?article=3368&context=etd

Bandura, A. (1965). Influence of models reinforcement contingencies on the acquisition of imitative responses. *Journal of Personality and Social Psychology, 1,* 589–595.

Bandura, A. (1973). *Aggression: A social learning analysis.* Prentice-Hall.

Bandura, A. (1977). *Social learning theory.* Prentice-Hall.

Bandura, A. (1981). Distinguished scientific contribution award. *American Psychologist, 36,* 27–42.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Bandura, A. (1989). Social cognitive theory. In R. Vasta (Ed.), *Annals of Child Development. Vol. 6. Six Theories of Child Development* (pp. 1–60). JAI Press.

Bandura, A. (1995). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 1–45). Cambridge University Press.

Bandura, A. (1997). *Self-efficacy: The Exercise of Control.* W. H. Freeman and Company.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52,* 1–26.

Bandura, A. (2011). But what about that gigantic elephant in the room? In R. Arkin (Ed.), *Most underappreciated: 50 prominent social psychologists describe their most unloved work* (pp. 51–59). Oxford University Press.

Bandura, A. (2012). On the functional properties of perceived self-efficacy revisited. *Journal of Management, 38,* 9–44.

Bandura, A. (2013). The role of self-efficacy in goal-based motivation. In E. Locke & G. Latham (Eds.), *New developments in goal setting and task performance* (pp. 147–157). Routledge/Taylor & Francis.

Bandura, A., Blanchard, E. B., & Ritter, B. (1969). The relative efficacy of desensitization and modeling approaches for inducing behavioral, affective, and attitudinal changes. *Journal of Personality and Social Psychology, 13,* 173–199.

Bandura, A., Caprara, G., Barbaranelli, C., Regalia, C., & Scabini, E. (2011). Impact of family efficacy beliefs on quality of family functioning and satisfaction with family life. *Applied Psychology: An International Review, 60,* 421–448.

Bandura, A., Grusec, J. E., & Menlove, F. L. (1967). Vicarious extinction of avoidance behavior through symbolic modeling. *Journal of Personality and Social Psychology, 5,* 16–22.

Bandura, A., Pastorelli, C., Barbaranelli, C., & Caprara, G. V. (1999). Self-efficacy pathways to childhood depression. *Journal of Personality and Social Psychology, 76,* 258–269.

Bandura, A., Ross, D., & Ross, S. A. (1963). Imitation of film-mediated aggressive models. *Journal of Abnormal and Social Psychology, 66,* 3–11.

Bandura, A., & Walters, R. (1963). *Social learning and personality development.* Holt, Rinehart & Winston.

Bang, H. (2015). African American undergraduate students' wisdom and ego-identity development: Effects of age, gender, self-esteem, and resilience. *Journal of Black Psychology*, *41*(2), 95–120.

Bannister, D., Fransella, F., & Agnew, J. (1971). Characteristics and validity of the grid test on thought disorder. *British Journal of Social and Clinical Psychology, 10,* 144–151.

Bannister, D., & Salmon, P. (1966). Schizophrenic thought disorder: Specific or diffuse? *British Journal of Medical Psychology, 39,* 215–219.

Baranowska-Rataj, A., Matysiak, A., & Mynarska, M. (2014). Does lone motherhood decrease women's happiness? Evidence from qualitative and quantitative research. *Journal of Happiness Studies, 15*, 1457–1477.

Barelds, D. (2005). Self and partner personality in intimate relationships. *European Journal of Personality, 19,* 501–518.

Barenbaum, N. (2008). Allport's use of personal documents in psychological science: The case study book that wasn't. *General Psychologist, 43*(2), 53–55.

Bargh, J. A., & Chartrand, T. L. (1999). The unbearable automaticity of being. *American Psychologist, 54,* 462–479.

Bargh, J. A., Gollwitzer, P., Lee-Chai, A., Barndollar, K., & Troetschel, R. (2001). The automated will: Nonconscious activation and pursuit of behavioral goals. *Journal of Personality and Social Psychology, 81,* 1014–1027.

Barker, E. T., Howard, A. L., Galambos, N. L., & Wrosch, C. (2016). Tracking affect and academic success across university: Happy students benefit from bouts of negative mood. *Developmental Psychology*, *52*(12), 2022. https://doi.org/10.1037/dev0000231

Barlow, P. J., Tobin, D. J., & Schmidt, M. M. (2009). Social Interest and Positive Psychology: Positively Aligned. *Journal of Individual Psychology, 65*(3).

Barnes, J., Boutwell, B., & Beaver, K. (2014). Genetic and nonshared environmental factors predict handgun ownership in early adulthood. *Death Studies, 38,* 156–164.

Barrault, S., & Varesconi, I. (2013). Impulsive sensation seeking and gambling practice among a sample of online poker players: Comparison between nonpathological, problem and pathological gamblers. *Personality and Individual Differences, 55,* 502–507.

Barrett, D., Sogolow, Z., Oh, A., Panton, J., Grayson, M., & Justiniano, M. (2014). Contents of dreams from WWII POWs. *Imagination, Cognition and Personality, 33,* 193–204.

Barrett, K. C., Zahn-Waxler, C., & Cole, P. M. (1993). Avoiders vs. amenders: Implications for the investigation of guilt and shame during toddlerhood? *Cognition & Emotion*, *7*(6), 481–505.

Barrett, L., Lane, R., Sechrest, L., & Schwartz, G. (2000). Sex differences in emotional awareness. *Personality and Social Psychology Bulletin, 26,* 1027–1035.

Barrett-Lennard, G. (2012). The Roosevelt years: Crucial milieu for Carl Rogers' innovation. *History of Psychology, 15*(1), 19–32.

Barrick, M. R., & Mount, M. K. (1996). Effects of impression management and self-deception on the predictive validity of personality constructs. *Journal of Applied Psychology, 81,* 261–272.

Barrick, M. R., Mount, M. K., & Strauss, J. P. (1993). Conscientiousness and performance of sales representatives. Test of the mediating effects of goal setting. *Journal of Applied Psychology, 78,* 715–722.

Barrineau, P. (2005). Personality types among undergraduates who withdraw from liberal arts college. *Journal of Psychological Type, 65,* 27–32.

Barry, C. M., & Wentzel, K. R. (2006). Friend influence on prosocial behavior: The role of motivational factors and friendship characteristics. *Developmental Psychology*, *42*(1), 153.

Barry, L., Kasl, S., Lichtman, J., Vaccarino, V., & Krumholz, H. (2006). Perceived control and change in physical functioning after coronary artery bypass grafting. *International Journal of Behavioral Medicine, 13,* 229–236.

Bartholow, B. D., Sestir, M. A., & Davis, E. B. (2005). Correlates and consequences of exposure to video game violence: Hostile personality, empathy, and aggressive behavior. *Personality and Social Psychology Bulletin*, *31*(11), 1573–1586.

Basran, J., Pires, C., Matos, M., McEwan, K., & Gilbert, P. (2019). Styles of leadership, fears of compassion, and competing to avoid inferiority. *Frontiers in Psychology*, *9*, 2460.

Bassi, M., Steca, P., Fave, A., & Caprara, G. (2007). Academic self-efficacy and quality of experience in learning. *Journal of Youth and Adolescence, 36,* 301–312.

Bassi, M., Steca, P., Monzani, D., Greco, A., & Fave, A. D. (2014). Personality and optimal experience in adolescence: Implication for well-being and development. *Journal of Happiness Studies, 15,* 829–843.

Bauer, J. J., & McAdams, D. P. (2004). Growth goals, maturity, and well-being. *Developmental Psychology*, *40*(1), 114.

Bauer, J. M., Levin, V., Munoz Boudet, A. M., Nie, P., & Sousa-Poza, A. (2017). Subjective well-being across the lifespan in Europe and Central Asia. *Journal of Population Ageing*, *10*, 125–158.

Baughman, H., Jonason, P., Veselka, L., & Vernon, P. (2014). Four shades of sexual fantasies linked to the Dark Triad. *Personality and Individual Differences, 67,* 47–51.

Baumeister, R. F., Maranges, H. M., & Vohs, K. D. (2018). Human self as information agent: Functioning in a social environment based on shared meanings. *Review of General Psychology*, *22*(1), 36–47.

Bayne, E. (2011). Womb envy: The cause of misogyny and even male achievement? In *Women's Studies International Forum* (34, No. 2, pp. 151–160). Pergamon.

Bayrakova, S. (2015). Most important work values in Bulgarian university students. *Psychological Thought*, *8*(1).

Beail, N., & Parker, S. (1991). Group fixed-role therapy: A clinical application. *International Journal of Personal Construct Psychology*, *4*(1), 85–95.

Beall, A. T., & Tracy, J. L. (2017). Emotivational psychology: How distinct emotions facilitate fundamental motives. *Social and Personality Psychology Compass*, *11*(2). https://doi.org/10.1111/spc3.12303

Beaudoin, M., & Desrichard, O. (2016). Memory self-efficacy and memory performance in older adults. *Swiss Journal of Psychology, 76*(1), 23–33.

Beaumont, S., & Zukanovic, R. (2005). Identity development in men and its relation to psychosocial distress and self-worth. *Canadian Journal of Behavioral Science, 37,* 70–81.

Beck, E., Burnet, K., & Vosper, J. (2006). Birth order effects on facets of extraversion. *Personality and Individual Differences, 40,* 953–959.

Begen, F., & Turner-Cobb, J. (2012). The need to belong and symptoms of acute physical health in early adolescence. *Journal of Health Psychology, 17*, 907–916.

Begue, L., & Roche, S. (2005). Birth order and youth delinquent behavior: Testing the differential parental control hypothesis in a French representative sample. *Psychology, Crime and Law, 11,* 73–85.

Bekalu, M. A., McCloud, R. F., Minsky, S., & Viswanath, K. (2021). Association of social participation, perception of neighborhood social cohesion, and social media use with happiness: Evidence of trade-off (JCOP-20-277). *Journal of Community Psychology*, *49*(2), 432–446.

Bell, C. A., Kamble, S. V., & Fincham, F. D. (2018). Forgiveness, attributions, and marital quality in US and Indian marriages. *Journal of Couple & Relationship Therapy*, *17*(4), 276–293.

Bell, R. C. (2004). Predictive relationships in repertory grid data: A new elaboration of Kelly's organization corollary. *Journal of Constructivist Psychology, 17*(4), 281–295.

Bell, S. J., & Bell, R. C. (2008). An illustration of self characterization in a child's drawing: The importance of process. *Personal Construct Theory & Practice, 5*, 1–9.

Belmont, L., & Marolla, F. A. (1973). Birth order, family size and intelligence. *Science, 182,* 1096–1101.

Belsky, J., & Pluess, M. (2013). Beyond risk, resilience, and dysregulation: Phenotypic plasticity and human development. *Development and Psychopathology*, *25*(4 pt2), 1243–1261.

Belsky, J., Schlomer, G. L., & Ellis, B. J. (2012). Beyond cumulative risk: Distinguishing harshness and unpredictability as determinants of parenting and early life history strategy. *Developmental Psychology*, *48*(3), 662–673. https://doi.org/10.1037/a0024454

Benet-Martinez, V., Lee, F., & Leu, J. (2006). Biculturalism and cultural complexity: Expertise in cultural representations. *Journal of Cross-Cultural Psychology, 37,* 386–407.

Benjafield, J. (2008). George Kelly: Cognitive psychologist, humanistic psychologist, or something else entirely? *History of Psychology, 11*(4), 239–262.

Bennett, D., Sullivan, M., & Lewis, M. (2010). Neglected children, shame-proneness, and depressive symptoms. *Child Maltreatment, 15*(4), 305–314.

Bennett, J. (2011, March 30). Does beauty buy happiness? *Yahoo! News*.

Benotsch, E., Jeffers, A., Snipes, D., Martin, A., & Koester, S. (2013). The five factor model of personality and the non-medical use of prescription drugs: Associations in a young adult sample. *Personality and Individual Differences, 55,* 852–855.

Ben-Porath, Y. S., & Tellegen, A. (2020). *Minnesota Multiphasic Personality Inventory-3 (MMPI-3): Manual for administration, scoring, and interpretation*. Pearson.

Benson-Townsend, B., & Silver, N. (2014, May 23). *Compulsive hoarding and consumer locus of control differences*. American Psychological Association Convention Presentation.

Berg, M. B., Janoff-Bulman, P., & Cotter, J. (2001). Perceiving value in obligations and goals: Wanting to do what should be done. *Personality and Social Psychology Bulletin, 27,* 982–995.

Bergeman, C. S., Chipeur, H. M., Plomin, R., Pedersen, N. L., McClearn, G. E., Nesselroade, J. R., Costa, P. T. Jr., & McCrae, R. R. (1993). Genetic and environmental effects on openness to experience, agreeableness, and conscientiousness: An adoption-twin study. *Journal of Personality, 61,* 159–179.

Bergin, A. E., & Strupp, H. H. (1972). *Changing frontiers in the science of psychotherapy.* Aldine-Atherton.

Bergvik, S., Sørlie, T., & Wynn, R. (2012). Coronary patients who returned to work had stronger internal locus of control beliefs than those who did not return to work. *British Journal of Health Psychology*, *17*(3), 596–608.

Berlin, M., & Kaunitz, N. (2014, September 20). Beyond income: The importance for life satisfaction of having access to a cash margin. *Journal of Happiness Studies*. http://link.springer.com/article/10.1007%2Fs10902-014-9575-7#page-2

Berman, J. (2008). Review of Living in the shadow of the Freud family [Review of the book Living in the shadow of the freud family, by S. Freud]. *Psychoanalytic Psychology, 25*(3), 560–563.

Berry, D. S. (1990). Taking people at face value: Evidence for the kernel of truth hypothesis. *Social Cognition, 8,* 343–361.

Berry, D. S., & Wero, J. L. F. (1993). Accuracy in face perception: A view from ecological psychology. *Journal of Personality, 61,* 497–520.

Berti, A. E., Garattoni, C., & Venturini, B. (2000). The understanding of sadness, guilt, and shame in 5-, 7-, and 9-year-old children. *Genetic, Social, and General Psychology Monographs*, *126*, 293–318.

Berzonsky, M. (2004). Identity style, parental authority, and identity commitment. *Journal of Youth and Adolescence, 33,* 213–220.

Bettelheim, B. (1984). *Freud and man's soul.* New York: Vintage Books.

Bettinger, E. P., & Long, B. T. (2005). Do faculty serve as role models? The impact of instructor gender on female students. *American Economic Review*, *95*(2), 152–157.

Beyers, W., & Seiffge-Krenke, I. (2010). Does identity precede intimacy? Testing Erikson's theory on romantic development in emerging adults of the 21st century. *Journal of Adolescent Research, 25*(3), 387–415.

Bhatt, S., & Bahadur, A. (2018). Importance of self esteem & self efficacy for college students. *Indian Journal of Community Psychology*, *14*(2), 409–419.

Bian, L., Leslie, S. J., & Cimpian, A. (2017). Gender stereotypes about intellectual ability emerge early and influence children's interests. *Science*, *355*(6323), 389–391.

Bian, L., Leslie, S. J., Murphy, M. C., & Cimpian, A. (2018). Messages about brilliance undermine women's interest in educational and professional opportunities. *Journal of Experimental Social Psychology*, *76*, 404–420.

Biao-Bin, V., Man-Na, H., Bi-Qun, Q., & Yong-Hong, H. (2006). Relationship between internet behavior and subjective wellbeing of teenagers. *Chinese Journal of Clinical Psychology, 14,* 68–69.

Bidjerano, T., & Newman, J. (2010). Autonomy in after-school activity choice among preadolescents from Taiwan and the United States. *The Journal of Early Adolescence, 30*(5), 733–764. https://doi.org/10.1177/0272431609342986

Biernacki, M. P., & Lewkowicz, R. (2020). Evidence for the role of personality in the cognitive performance of older male drivers. *Transportation Research Part F: Traffic Psychology and Behaviour*, *69*, 385–400.

Billstedt, E., Skoog, I., Duberstein, T., Hallstrom, T., Andre, M., Lissner, L., Björkelund, C., Ostling, S., & Waern, M. (2014). A 37-year prospective study of neuroticism and extraversion in women followed from mid-life to late life. *Acta Scandinavica, 129,* 35–43.

Bilsker, D., & Marcia, J. E. (1991). Adaptive regression and ego identity. *Journal of Adolescence, 14,* 75–84.

Birenbaum, M., Nasser-Abu Alhija, F., Shilton, H., Kimron, H., Rosanski, R., & Shahor, N. (2019). A further look at the five-dimensional curiosity construct. *Personality and Individual Differences*, *149*, 57–65. https://doi.org/10.1016/j.paid.2019.05.038

Bjork, D. W. (1993). *B. F. Skinner: A life.* Basic Books.

Bjork, R., & Druckman, D. (1991). How Do You Improve Human Performance?. *APS Observer*, 4.

Blackburn, L., & Owens, G. P. (2015). The effect of self-efficacy and meaning in life on posttraumatic stress disorder and depression severity among veterans. *Journal of Clinical Psychology*, *71*(3), 219–228.

Blackhart, G., Fitzpatrick, J., & Williamson, J. (2014). Dispositional factors predicting use of online dating sites and behaviors related to online dating. *Computers in Human Behavior, 33,* 113–118.

Blackman, D. E. (1995). B. F. Skinner (1904–1990). In R. Fuller (Ed.), *Seven pioneers of psychology: Behavior and mind* (pp. 107–129). Routledge.

Blais, J., Craig, W., Pepler, D., & Connolly, J. (2008). Adolescents online: The importance of Internet activity choices to salient relationships. *Journal of Youth & Adolescence, 37,* 522–536.

Blake, P. R., Corbit, J., Callaghan, T. C., & Warneken, F. (2016). Give as I give: Adult influence on children's giving in two cultures. *Journal of Experimental Child Psychology, 152,* 149–160. http://dx.doi.org/10.1016/j.jecp.2016.07.010

Blanchard, C., Arthur, H. M., & Gunn, E. (2015). Self-efficacy and outcome expectations in cardiac rehabilitation: Associations with women's physical activity. *Rehabilitation Psychology*, *60*(1), 59.

Blanchflower, D. G., & Graham, C. L. (2021). The U shape of happiness: A response. *Perspectives on Psychological Science*, *16*(6), 1435–1446.

Blanchflower, D. G., & Oswald, A. J. (2019). *Do humans suffer a psychological low in midlife? Two approaches (with and without controls) in seven data sets* (pp. 439–453). Springer International Publishing.

Blanton, H., Axsom, D., McClive, K., & Price, S. (2001). Pessimistic bias in comparative evaluations: A case of perceived vulnerability to the effects of negative life events. *Personality and Social Psychology Bulletin, 27,* 1627–1636.

Blanton, S. (1971). *Diary of my analysis with Sigmund Freud.* New York: Hawthorn Books.

Bleidorn, W., Kandler, C., & Caspi, A. (2014). The behavioural genetics of personality development in adulthood—classic, contemporary, and future trends. *European Journal of Personality*, *28*(3), 244–255. https://doi.org/10.1002/per.1957

Bleidorn, W., Kandler, C., Hulsheger, U., Reimann, R., Angleitner, A., & Spinath, F. (2010). Nature and nurture of the interplay between personality traits and major life goals. *Journal of Personality and Social Psychology, 99*(2), 366–379.

Block, J., & Block, J. (1980). The role of ego-control and ego-resiliency in the organization of behavior. In W. A. Collins (Ed.), *The Minnesota symposium on child psychology* (Vol. 13, pp. 39–101). Hillsdale, NJ: Erlbaum.

Block, J., & Block, J. (2006). Venturing a 30-year longitudinal study. *American Psychologist, 61,* 315–327.

Block, J., & Block, J. H. (1980). *The California Child Q-Set.* Consulting Psychologists Press.

Bloland, S. (2005). *In the shadow of fame: A memoir by the daughter of Erik H. Erikson*. Viking Press.

Blosnich, J., Brown, G., Shipherd, J., Kauth, M., Piegeri, I., & Bossarte, R. (2013). Prevalence of gender identity disorder and suicide risk among transgender veterans utilizing Veterans Health Administration care. *American Journal of Public Health, 103*, 27–32.

Blume-Marcovici, A. (2010). Gender differences in dreams: Applications to dream work with male clients. *Dreaming, 20* (3), 199–210.

Blumer, T., & Doring, N. (2012). Are we the same online? The expression of the five factor personality traits on the computer and the Internet. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 6*(3). http://www. cyberpsychology.eu/view.php?cisloclanku=2012121201

Bluml, V., Kapusta, N., Doering, S., Brahler, E., Wagner, B., & Kersting, A. (2013, October 4). Personality factors and suicide risk in a representative sample of the German general population. *PLoS ONE, 8,* Article e76646.

Blustein, D. L., Devenis, L. E., & Kidney, B. A. (1989). Relationship between the identity formation process and career development. *Journal of Counseling Psychology, 36,* 196–202.

Bluvshtein, M., Wilson, M., Moore, T., Napoleón, J., & Watkins, K. A. (2021). Kenneth B. Clark and his "Implications of Adlerian theory for an understanding of civil rights problems and actions": 54 years later. *The Journal of Individual Psychology, 77*(3), 253–275. https://doi.org/10.1353/jip.2021.0028

Bockerman, P., Johansson, E., Saarni, S., & Saarni, S. (2014). The negative association of obesity with subjective well-being: Is it all about health? *Journal of Happiness Studies, 15,* 857–867.

Bockting, W. (2014). The impact of stigma on transgender identity development and mental health. In B. Kreukels, T. Steensma, & A. de Vries (Eds.), *Gender dysphoria and disorders of sex development: Progress in care and knowledge* (pp. 319–330). US Springer Science.

Boden, J., & Baumeister, R. (1997). Repressive coping: Distraction using pleasant thoughts and memories. *Journal of Personality and Social Psychology, 73,* 45–62.

Boduszek, D., Shevlin, M., Adamson, G., & Hyland, P. (2013). Eysenck's personality model and criminal thinking within a violent and nonviolent offender sample: Application of propensity score analysis. *Deviant Behavior, 34,* 483–493.

Boehm, J., & Lyubomirsky, S. (2008). Does happiness promote career success? *Journal of Career Assessment, 16*(1), 101–116.

Boerner, M., Joseph, S., & Murphy, D. (2017). A theory on reports of constructive (real) and illusory posttraumatic growth. *Journal of Humanistic Psychology*, *60*(3), 384–399. https://doi.org/10.1177/0022167817719597

Bohart, A. (2014). *A deeper understanding of person-centered principles can enhance practiced.* American Psychological Association Convention Program. http://psycnet.apa.org/psycextra/538772014-001.pdf

Bonetti, L., Campbell, M., & Gilmore, L. (2010). The relationship of loneliness and social anxiety with children's and adolescents' online communication. *Cyberpsychology, Behavior, and Social Networking, 13*(3), 279–285.

Bonneville-Roussy, A., & Bouffard, T. (2015). When quantity is not enough: Disentangling the roles of practice time, self-regulation and deliberate practice in musical achievement. *Psychology of Music*, *43*(5), 686–704.

Borek, A. J., & Abraham, C. (2018). How do small groups promote behaviour change? An integrative conceptual review of explanatory mechanisms. *Applied Psychology: Health and Well-Being*, *10*(1), 30–61. https://doi.org/10.1111/aphw.12120

Borgogni, L., Petitta, L., & Mastrorilli, A. (2010). Correlates of collective efficacy in the Italian Air Force. *Applied Psychology: An International Review, 59*(3), 515–537.

Borisenko, J. (2007). Fatherhood as a personality development factor in men. *The Spanish Journal of Psychology*, *10*(1), 82–90.

Bork, P., & Bennett, S. (2020). Video self-modeling, fading, and reinforcement: An effective treatment package for children with selective mutism. *Clinical Child Psychology and Psychiatry*, *25*(2), 446–455.

Bornstein, R. F., & Masling, J. M. (1998). Introduction: The psychoanalytic unconscious. In R. F. Bornstein & J. M. Masling (Eds.), *Empirical perspectives on the psychoanalytic unconscious* (pp. xiii–xxviii). Washington, DC: American Psychological Association.

Boruszak-Kiziukiewicz, J., & Kmita, G. (2020). Parenting self-efficacy in immigrant families—A systematic review. *Frontiers in Psychology*, *11*, 985.

Bottome, P. (1939). *Alfred Adler: A biography.* Putnam.

Bouchard Jr, T. J. (2004). Genetic influence on human psychological traits: A survey. *Current Directions in Psychological Science, 13*(4), 148–151.

Bouchard, T. J. (1985). Twins reared together and apart: What they tell us about human diversity. In S. W. Fox (Ed.), *Individuality and determinism: Chemical and biological bases* (pp. 147–184). Plenum Press.

Bourne, E. (1978a). The state of research on ego identity: A review and appraisal. Part I. *Journal of Youth and Adolescence, 7,* 223–257.

Bourne, E. (1978b). The state of research on ego identity: A review and appraisal. Part II. *Journal of Youth and Adolescence, 7,* 371–392.

Bowker, A. (2006). The relationship between sports participation and self-esteem during early adolescence. *Canadian Journal of Behavioral Science, 38*, 214–229.

Bowler, M., Bowler, J., & Phillips, B. (2009). The Big- 5 ± 2? The impact of cognitive complexity on the factor structure of the five-factor model. *Personality and Individual Differences, 47,* 979–984.

Bowler, M. C., Bowler, J. L., & Cope, J. G. (2012). Further evidence of the impact of cognitive complexity on the five-factor model. *Social Behavior and Personality: An International Journal*, *40*(7), 1083–1097.

Boyce, C., Wood, A., & Brown, G. (2010). The dark side of conscientiousness: Conscientious people experience greater drops in life satisfaction following unemployment. *Journal of Research in Personality, 44,* 535–539.

Boyle, G. J. (1995). Myers-Briggs type indicator (MBTI): some psychometric limitations. *Australian Psychologist*, *30*(1), 71–74.

Bozarth, J. (2012). "Nondirectivity" in the theory of Carl R. Rogers: An unprecedented premise. *Person-Centered and Experiential Psychotherapies, 11,* 262–276.

Braaksma, M. A., Rijlaarsdam, G., & Van den Bergh, H. (2002). Observational learning and the effects of model–observer similarity. *Journal of Educational Psychology*, *94*(2), 405.

Bracey, J., Bamaca, M., & Umana-Taylor, A. (2004). Examining ethnic identity and self-esteem among biracial and monoracial adolescents. *Journal of Youth and Adolescence, 33,* 123–132.

Breger, L. (2000). *Freud: Darkness in the midst of vision*. New York: Wiley.

Breger, L. (2009). *A dream of undying fame: How Freud betrayed his mentor and invented psychoanalysis*. Basic Books (AZ).

Breger, L., Hunter, I., & Lane, R. W. (1971). *The effect of stress on dreams*. International Universities Press.

Breland, H. M. (1974). Birth order, family configuration and verbal achievement. *Child Development, 45,* 1011–1019.

Breland, K., & Breland, M. (1961). The misbehavior of organisms. *American Psychologist, 16,* 681–684.

Brewer, J. A., Roy, A., Deluty, A., Liu, T., & Hoge, E. A. (2020). Can mindfulness mechanistically target worry to improve sleep disturbances? Theory and study protocol for app-based anxiety program. *Health Psychology, 39*(9), 776.

Brewin, C. R., Andrews, B., & Gotlib, I. H. (1993). Psychopathology and early experience: A reappraisal of retrospective reports. *Psychological Bulletin*, *113*(1), 82.

Brewster, F. (2019). Childhood innocence: Racial prejudice and the shaping of psychological complexes. *Psychological Perspectives, 62*(2–3), 164–175. https://doi.org/10.1080/00332925.2019.1624439

Bridges, A., de Arellano, M., Rheingold, A., Danielson, C., & Silcott, L. (2010). Trauma exposure, mental health, and service utilization rates among immigrant and United States-born Hispanic youth: Results from the Hispanic family study. *Psychological Trauma: Theory, Research, Practice, & Policy, 2*(1), 40–48.

Brière, M., Le Roy, J., & Meier, O. (2021). Linking servant leadership to positive deviant behavior: The mediating role of self-determination theory. *Journal of Applied Social Psychology*, *51*(2), 65–78.

Briggs, K. C., & Myers, I. B. (1943, 1976). *Myers-Briggs type indicator.* Consulting Psychologists Press.

Briley, D. A., & Tucker-Drob, E. M. (2014). Genetic and environmental continuity in personality development: A meta-analysis. *Psychological Bulletin*, *140*(5), 1303.

Brissette, I., Scheier, M., & Carver, C. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology, 82,* 102–111.

Brockmann, J., Kirsch, H., Dembler, K., König, D., de Vries, I., Zabolitzki, M., & Silberschatz, G. (2018). Effects of interventions promoting mentalization and interventions disconfirming pathogenic beliefs: A comparative single case study of three patients. *Cogent Psychology*, *5*(1), 1470482. https://doi.org/10.1080/23311908.2018.1470482

Brody, G. H., Kogan, S. M., & Grange, C. M. (2012). Translating longitudinal, developmental research with rural African American families into prevention programs for rural African American youth. In R. B. King & V. Maholmes (Eds.), *The Oxford handbook of poverty and child development* (pp. 553–570). Oxford University Press–USA.

Brody, G. H., Yu, T., Miller, G. E., & Chen, E. (2020). A family-centered prevention ameliorates the associations of low self-control during childhood with employment income and poverty status in young African American adults. *Journal of Child Psychology and Psychiatry*, *61*(4), 425–435.

Brody, N. (1997). Dispositional paradigms: Comment on Eysenck (1997) and the biosocial science of individual differences. *Journal of Personality and Social Psychology, 73,* 1242–1245.

Brome, V. (1981). *Jung: Man and myth.* Atheneum.

Brooks, J. R., Madubata, I. J., Jewell, R. D., Ortiz, D. A., & Walker, R. L. (2021). Depression and suicide ideation: The role of self-acceptance for black young adults. *Journal of Black Psychology*, *49*(3), 382–403.

Brown, C., Matthews, K., & Bromberger, J. (2005). How do African-American and Caucasian women view themselves at midlife? *Journal of Applied Social Psychology, 35,* 2057–2075.

Brown, C. J., Butt, J., & Sarkar, M. (2020). Overcoming performance slumps: Psychological resilience in expert cricket batsmen. *Journal of Applied Sport Psychology*, *32*(3), 277–296.

Brown, J. (2010). High self-esteem buffers negative feedback: Once more with feeling. *Cognition and Emotion, 24*(8), 1389–1404.

Brown, K. S., Londergan, K., & Bluvshtein, M. (2020). And they lived happily ever after: An intimate closeness of systems and Adlerian theories in the case of a transgender couple. *The Journal of Individual Psychology, 76*(1), 128–140. https://doi.org/10.1353/jip.2020.0023

Brown, N. W. (2011). *Psychoeducational educational groups: process and practice*. Taylor and Francis.

Brumbach, B. H., Figueredo, A. J., & Ellis, B. J. (2009). Effects of harsh and unpredictable environments in adolescence on development of life history strategies. *Human Nature, 20*(1), 25–51.

Buchanan, L. P., Kern, R., & Bell-Dumas, J. (1991). Comparison of content in created versus actual early recollections. *Individual Psychology, 47,* 348–355.

Buckels, E., Trapnell, P., & Paulhus, D. (2014). Trolls just want to have fun. *Personality and Individual Differences, 67,* 97–102.

Buda, D. M. (2015). The death drive in tourism studies. *Annals of Tourism Research*, *50*, 39–51.

Budge, S., Adelson, J., & Howard, K. (2013). Anxiety and depression in transgender individuals: The roles of transition, loss, social support and coping. *Journal of Consulting and Clinical Psychology, 81,* 545–557.

Buhrmester, M., Kwang, T., & Gosling, S. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality data? *Perspectives on Psychological Science, 6*(1), 3–5.

Bullard, A. (2005). The critical impact of Franz Fanon and Henri Collomb: Race, gender, and personality testing of North and West Africans. *Journal of the History of the Behavioral Sciences, 41,* 225–248.

Bullock, W. A., & Gilliland, K. (1993). Eysenck's arousal theory of introversion-extraversion: A converging measures investigation. *Journal of Personality and Social Psychology, 64,* 113–123.

Burger, J., & Lynn, A. (2005). Superstitious behavior among American and Japanese professional baseball players. *Basic and Applied Social Psychology, 27,* 71–76.

Burić, I., Slišković, A., & Sorić, I. (2020). Teachers' emotions and self-efficacy: A test of reciprocal relations. *Frontiers in Psychology*, *11*, 1650.

Burling, S. (2010, May 30). The power of a positive thinker. *Philadelphia Inquirer*.

Burns, K. M., Burns, N. R., & Ward, L. (2016). Confidence—More a personality or ability trait? It depends on how it is measured: A comparison of young and older adults. *Frontiers in Psychology*, *7*, 518.

Burr, V., Giliberto, M., & Butt, T. (2014). Construing the cultural other and the self: A personal construct analysis of English and Italian perceptions of national character. *International Journal of Intercultural Relations, 39*, 53–65. https://doi.org/10.1016/j.ijintrel.2013.09.012

Burton, A. L., & Abbott, M. J. (2019). Processes and pathways to binge eating: Development of an integrated cognitive and behavioural model of binge eating. *Journal of Eating Disorders*, *7*(1), 1–9.

Burwick, S., & Knapp, R. R. (1991). Advances in research using the Personal Orientation Inventory. *Journal of Social Behavior and Personality*, *6*(5), 311.

Bushman, B., Bonacci, A., Pedersen, W., Vasquez, E., & Miller, N. (2005). Chewing on it can chew you up: Effects of rumination on triggered displaced aggression. *Journal of Personality and Social Psychology, 88,* 969–983.

Bushman, B., Moeller, S., & Crocker, J. (2011). Sweets, sex, or self-esteem? Comparing the value of self-esteem boosts with other pleasant rewards. *Journal of Personality, 79,* 993–1012.

Bushman, B., & Whitaker, J. (2010). Like a magnet: Catharsis beliefs attract angry people to violent video games. *Psychological Science, 21*(6), 790–792.

Bushman, B. J. (2002). Does venting anger feed or extinguish the flame? Catharsis, rumination, distraction, anger, and aggressive responding. *Personality and Social Psychology Bulletin, 28,* 724–731.

Bushman, B. J., Baumeister, R. F., & Stack, A. D. (1999). Catharsis, aggression, and persuasive influence: Self-fulfilling or self-defeating prophecies? *Journal of Personality and Social Psychology, 76,* 367–376.

Bushman, B. J., Gollwitzer, M., & Cruz, C. (2015). There is broad consensus: Media researchers agree that violent media increase aggression in children, and pediatricians and parents concur. *Psychology of Popular Media Culture*, *4*(3), 200. https://doi.org/10.1037/ppm0000046

Buss, A. H. (1988). *Personality: Evolutionary heritage and human distinctiveness*. Erlbaum.

Buss, A. H., & Plomin, R. (1984). *Temperament: Early developing personality traits.* Erlbaum.

Buss, D. M. (1991). Evolutionary personality psychology. *Annual Review of Psychology, 42*(1), 459–491.

Bussey, K., Fitzpatrick, S., & Raman, A. (2015). The role of moral disengagement and self-efficacy in cyberbullying. *Journal of School Violence, 14,* 30–46.

Butcher, J. (2004). Personality assessment without borders: Adaptation of the MMPI-2 across cultures. *Journal of Personality Assessment, 83,* 90–104.

Butcher, J. (2010). Personality assessment from the nineteenth to the early twenty-first century: Past achievement and contemporary challenges. *Annual Review of Clinical Psychology, 6,* 1–20.

Butkovic, A., Ullen, F., & Mosing, M. (2015). Personality related traits as predictors of music practice: Underlying environmental and genetic influences. *Personality and Individual Differences, 74,* 133–138.

Butler, J. M., & Haigh, G. V. (1954). Changes in the relationship between self-concepts and ideal concepts consequent upon client-centered counseling. In C. R. Rogers & R. F. Dymond (Eds.), *Psychotherapy and Personality Change.* University of Chicago Press.

Butovskaya, M. L., & Demianovitsch, A. N. (2002). Social competence and behavior evaluation (SCBE-30) and socialization values (SVQ): Russian children ages 3 to 6 years. *Early Education and Development*, *13*(2), 153–170.

Butt, T. (2008). *George Kelly and the psychology of personal constructs (mind shapers).* Palgrave Macmillan.

Buttelmann, D., Zmyj, N., Daum, M., & Carpenter, M. (2013). Selective imitation of in-group over out-group members in 14-month-old infants. *Child Development. 84,* 422–428. https://doi.org/10.1111/j.1467-8624.2012.01860.x

Butz, A. R., & Usher, E. L. (2015). Salient sources of early adolescents' self-efficacy in two domains. *Contemporary Educational Psychology*, *42*, 49–61.

Buzzai, C., Sorrenti, L., Tripiciano, F., Orecchio, S., & Filippello, P. (2021). School alienation and academic achievement: The role of learned helplessness and mastery orientation. *School Psychology, 36*(1), 17–23.

Bynum, M., Burton, E., & Best, C. (2007). Racism experiences and psychological functioning in African American college freshmen: Is racial socialization a buffer? *Cultural Diversity and Ethnic Minority Psychology, 13,* 64–71.

Byrne, K. A., Silasi-Mansat, C. D., & Worthy, D. A. (2015). Who chokes under pressure? The Big Five personality traits and decision-making under pressure. *Personality and Individual Differences*, *74*, 22–28. https://doi.org/10.1016/j.paid.2014.10.009

Cai, H., Shi, Y., Fang, X., & Luo, Y. L. (2015). Narcissism predicts impulsive buying: Phenotypic and genetic evidence. *Frontiers in Psychology*, *6*, 881.

Cai, H., Wu, Q., & Brown, J. D. (2009). Is self-esteem a universal need? Evidence of People's Republic of China. *Asian Journal of Social Psychology, 12,* 104–120.

Cain, D. (2013). Person-centered therapy. In J. Frew & D. Spiegler (Eds.), *Contemporary psychotherapies for a diverse world* (1st rev. ed., pp. 165–213). Routledge Taylor & Francis.

Cain, D. (2014). Person-centered therapy. In G. VandenBlos, E. Meidenbauer, & N. K. Frank (Eds.), *Psychotherapy*

techniques: A reader (pp. 251–259). American Psychological Association.

Cakir, S. (2014). Ego identity status and psychological well-being among Turkish emerging adults. *Identity: An International Journal of Theory and Research, 14,* 230–239.

Calvert, S., Strouse, G., Strong, B., Huffaker, D., & Lai, S. (2009). Preadolescent girls' and boys' virtual MUD play. *Journal of Applied Developmental Psychology, 30*(3), 250–264.

Calvete, E., Orue, I., Estevez, A., Villardon, L., & Padilla, P. (2010). Cyberbullying in adolescents: Modalities and aggressors profile. *Computer in Human Behavior, 26*(5), 1128–1135.

Camacho, E. M., Verstappen, S. M. M., & Symmons, D. P. M. (2012). Association between socioeconomic status, learned helplessness, and disease outcome in patients with inflammatory polyarthritis. *Arthritis Care & Research*, *64*(8), 1225–1232.

Campbell, W. K., Rudich, E. A., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: Two portraits of self-love. *Personality and Social Psychology Bulletin, 28,* 358–368.

Camperio Ciani, A. S., Capiluppi, C., Veronese, A., & Sartori, G. (2007). The adaptive value of personality differences revealed by small island population dynamics. *European Journal of Personality, 21,* 3–22.

Camras, L. (1998). Production of emotional facial expressions in European American, Japanese, and Chinese infants. *Developmental Psychology, 34,* 616–628.

Camras, L., Bakeman, R., Chen, Y., Norris, K., & Cain, T. (2006). Culture, ethnicity, and children's facial expressions: A study of European, American, Mainland Chinese, Chinese American, and adopted Chinese girls. *Emotion, 6,* 103–114.

Camras, L., Oster, H., Campos, J. J., Miyake, K., & Bradshaw, D. (1998). Japanese and American infants' responses to arm restraint. In P. Ekman & E. L. Rosenberg (Eds.), *What the face reveals* (pp. 289–301). Oxford University Press.

Canale, N., Vieno, A., Lenzi, M., Griffiths, M. D., Perkins, D. D., & Santinello, M. (2018). Cross-national differences in risk preference and individual deprivation: A large-scale empirical study. *Personality and Individual Differences*, *126*, 52–60. https://doi.org/10.1016/j.paid.2018.01.006

Cann, D. R., & Donderi, D. C. (1986). Jungian personality typology and the recall of everyday and archetypal dreams. *Journal of Personality and Social Psychology, 50,* 1021–1030.

Canter, D., Sarangi, S., & Youngs, D. (2014). Terrorists' personal constructs and their roles: A comparison of three Islamic terrorists. *Legal and Criminological Psychology, 19,* 160–178.

Capa-Aydin, Y., Uzuntiryaki-Kondakci, E., & Ceylandag, R. (2018). The relationship between vicarious experience, social persuasion, physiological state, and chemistry self-efficacy: The role of mastery experience as a mediator. *Psychology in the Schools*, *55*(10), 1224–1238.

Capron, E. (2004). Types of pampering and the narcissistic personality trait. *Journal of Individual Psychology, 60,* 76–83.

Caravas, P., Kritikos, J., Alevizopoulos, G., & Koutsouris, D. (2020, December). Participant modeling: The use of a guided master in the modern world of virtual reality exposure therapy targeting fear of heights. In *International Conference on Wearables in Healthcare* (pp. 161–174). Springer International Publishing.

Carlson, R. (1980). Studies of Jungian typology: II. Representations of the personal world. *Journal of Personality and Social Psychology, 38,* 801–810.

Carlson, R., & Levy, N. (1973). Studies of Jungian typology: I. Memory, social perception, and social action. *Journal of Personality, 41,* 559–576.

Carlson, S. E., Smith, T. W., Parkhurst, K. A., Tinajero, R., Grove, J. L., Goans, C., Hirai, Michiyo, & Ruiz, J. M. (2022). Moving toward, moving against, and moving away: An interpersonal approach to construct validation of the Horney–Coolidge type inventory. *Journal of Personality Assessment*, *104*(5), 650–659.

Carmichael, C. L., Goldberg, M. H., & Coyle, M. A. (2021). Security-based differences in touch behavior and its relational benefits. *Social Psychological and Personality Science*, *12*(4), 550–560.

Carmichael, C. M., & McGue, M. (1994). A longitudinal family study of personality change and stability. *Journal of Personality, 62,* 1–20.

Carnesten, H., Asp, M., & Holmberg, M. (2021). Caring approach for patients with chest pain—Swedish registered nurses' lived experiences in Emergency Medical Services. *International Journal of Qualitative Studies on Health and Well-being*, *16*(1), 1901449.

Carr, D. (2004). "My daughter has a career; I just raised babies." The psychological consequences of women's intergenerational social comparison. *Social Psychology Quarterly, 67,* 132–154.

Carr, D., Freedman, V., Cornman, J., & Schwarz, N. (2014). Happy marriage, happy life? Marital quality and subjective well-being in later life. *Journal of Marriage and Family, 76,* 930–948.

Carrera, S. G., & Wei, M. (2017). Thwarted belongingness, perceived burdensomeness, and depression among Asian Americans: A longitudinal study of interpersonal shame as a mediator and perfectionistic family discrepancy as a moderator. *Journal of Counseling Psychology*, *64*(3), 280–291. https://doi.org/10.1037/cou0000199

Carroll, W. R., & Bandura, A. (1985). Role of timing of visual monitoring and motor rehearsal in observational learning of action patterns. *Journal of Motor Behavior, 17*, 269–281.

Carroll, W. R., & Bandura, A. (1990). Representational guidance of action production in observational learning: A causal analysis. *Journal of Motor Behavior*, *22*(1), 85–97.

Carrus, G., Scopelliti, M., Lafortezza, R., Colangelo, G., Ferrini, F., Salbitano, F., Agrimi, M., Portoghesi, L., Semenzato, P., & Sanesi, G. (2015). Go greener, feel

better? The positive effects of biodiversity on the well-being of individuals visiting urban and peri-urban green areas. *Landscape and Urban Planning*, 134, 221–228. https://doi.org/10.1016/j.landurbplan.2014.10.022

Carter, P. J., Hore, B., McGarrigle, L., Edwards, M., Doeg, G., Oakes, R., Campion, A., Carey, G., Vickers, K., & Parkinson, J. A. (2018). Happy thoughts: Enhancing well-being in the classroom with a positive events diary. *The Journal of Positive Psychology*, *13*(2), 110–121.

Carver, C., & Connor-Smith, J. (2010). Personality and coping. In S. Fiske, R. Schacter, & R. Sternberg (Eds.), *Annual review of psychology, 61,* 679–704.

Carver, C., & Scheier, M. (2014). Dispositional optimism. *Trends in Cognitive Science, 18,* 293–299.

Carver, C. S., & Scheier, M. (2002). Optimism. In C. Snyder & S. Lopez (Eds.), *Handbook of positive psychology* (pp. 231–243). Oxford University Press.

Casey, B. M., Pezaris, E. E., & Bassi, J. (2012). Adolescent boys' and girls' block constructions differ in structural balance: A block-building characteristic related to math achievement. *Learning and Individual Differences*, *22*(1), 25–36.

Caspi, A., Bem, D. J., & Elder, G. H. (1989). Continuities and consequences of interactional styles across the life course. *Journal of Personality, 57,* 375–406.

Caspi, A., Elder, G. H., & Bem, D. J. (1987). Moving against the world: Life course patterns of explosive children. *Developmental Psychology, 23,* 308–313.

Caspi, A., Elder, G. H., & Bem, D. J. (1988). Moving away from the world: Life course patterns of shy children. *Developmental Psychology, 24,* 824–831.

Cassidy, S. (2015). Resilience building in students: The role of academic self-efficacy. *Frontiers in Psychology*, *6*, 1781.

Castel, A. D., Humphreys, K. L., Lee, S. S., Galván, A., Balota, D. A., & McCabe, D. P. (2011). The development of memory efficiency and value-directed remembering across the life span: A cross-sectional study of memory and selectivity. *Developmental Psychology, 47*(6), 1553–1564. https://doi.org/10.1037/a0025623

Castro, A., Echavarria, A., & Velasquez, R. (2010). *Locus of control and depression in culturally diverse psychiatric patients*. American Psychological Association Convention Presentation.

Castro, F. N., Hattori, W. T., Gaulin, S. J. C., Yamamoto, M. E., & Lopes, F. d. A. (2018). Female expectations on romantic market in a sample of Brazilian and American women. *Psychology & Neuroscience, 11*(4), 404–416. https://doi.org/10.1037/pne0000129

Castro, F. N., Hattori, W. T., Gaulin, S. J., Yamamoto, M. E., & Lopes, F. D. A. (2021). Male mating expectations in Brazilian and American samples. *Frontiers in Psychology*, *12*, 617754.

Cattelino, E., Testa, S., Calandri, E., Fedi, A., Gattino, S., Graziano, F., Rollero, C., & Begotti, T. (2021). Self-efficacy, subjective well-being and positive coping in adolescents with regard to Covid-19 lockdown. *Current Psychology*, 1–12.

Cattell R. B. (1950). *Personality: A systematic theoretical and factual study* (First). McGraw-Hill.

Cattell, R. B. (1959). Foundations of personality measurement theory in multivariate experiment. In Louisiana State University Psychology Symposium, Feb, 1958, Baton Rouge, LA, US. D Van Nostrand.

Cattell, R. B. (1965, 1970). *The scientific analysis of personality.* Penguin Books.

Cattell, R. B. (1973). *Personality and mood by questionnaire*. Jossey-Bass.

Cattell, R. B. (1974a). Autobiography. In G. Lindzey (Ed.), *A history of psychology in autobiography* (Vol. 6, pp. 59–100). Prentice-Hall.

Cattell, R. B. (1974b). Travels in psychological hyperspace. In T. S. Krawiec (Ed.), *The psychologists* (Vol. 2, pp. 85–133). Oxford University Press.

Cattell, R. B. (1982). *The inheritance of personality and ability: Research methods*. Academic Press.

Cattell, R. B. (1993). Planning basic clinical research. In C. E. Walker (Ed.), *The history of clinical psychology in autobiography* (Vol. 2, pp. 101–111). Brooks/Cole.

Cattell, R. B., & Kline, P. (1977). *The scientific analysis of personality and motivation*. Academic Press.

Cattell, R. B., & Nesselroade, J. R. (1967). Likeness and completeness theories examined by sixteen personality factor measures by stably and unstably married couples. *Journal of Personality and Social Psychology, 7,* 351–361.

Cavazza, N., Guidetti, M., & Pagliaro, S. (2014). Who cares for reputation? Individual differences and concern for reputation. *Current Psychology*, *34*(1), 164–176. https://doi.org/10.1007/s12144-014-9249-y

Ceci, S. J., & Bruck, M. (1993). Suggestibility of the child witness: A historical review and synthesis. *Psychological Bulletin, 113,* 403–439.

Chae, H., & Park, J. (2020). Interactive effects of employee and coworker general self-efficacy on job performance and knowledge sharing. *Social Behavior and Personality: An International Journal*, *48*(7), 1–11.

Chae, M., & Foley, P. (2010). Relationship of ethnic identity, acculturation, and psychological well-being among Chinese, Japanese, and Korean Americans. *Journal of Counseling and Development, 88,* 466–476.

Chamber, S., & Hammonds, F. (2014). Vicariously learned helplessness: The role of perceived dominance and prestige of a model. *Journal of General Psychology, 141,* 280–295.

Chamorro-Premuzic, T., Furnham, A., & Petrides, K. (2006). Personality and intelligence: The relationship of Eysenck's giant three with verbal and numerical ability. *Journal of Individual Differences, 27,* 147–150.

Chan, R. C. (2022). A social cognitive perspective on gender disparities in self-efficacy, interest, and aspirations in science, technology, engineering, and mathematics (STEM): The influence of cultural and gender norms. *International Journal of STEM Education*, *9*(1), 1–13.

Chang, E., Asakawa, K., & Sanna, L. (2001). Cultural variations in optimistic and pessimistic bias: Do Easterners really expect the worst and Westerners really expect the best when predicting future life events? *Journal of Personality and Social Psychology, 81,* 476–491.

Chang, E., & Sanna, L. (2001). Optimism, pessimism, and positive and negative affectivity in middle-aged adults: A test of a cognitive-affective model of psychological adjustment. *Psychology and Aging, 16,* 524–531.

Chang, E., Yu, E., Lee, J., Hirsh, J., Kupfermann, Y., & Kahle, E. (2013). An examination of optimism/pessimism and suicide risk in primary care patients: Does belief in a changeable future make a difference? *Cognitive Therapy and Research, 37,* 796–804.

Chang, E. C., & Asakawa, K. (2003). Cultural variations on optimistic and pessimistic bias for self versus a sibling: Is there evidence for self-enhancement in the West and for self-criticism in the East when the referent group is specified? *Journal of Personality and Social Psychology*, *84*(3), 569–581.

Chang, E. C., Chang, O. D., Li, M., Xi, Z., Liu, Y., Zhang, X., & Chen, X. (2019). Positive emotions, hope, and life satisfaction in Chinese adults: A test of the broaden-and-build model in accounting for subjective well-being in Chinese college students. *The Journal of Positive Psychology*, *14*(6), 829–835. https://doi.org/10.1080/17439760.2019.1579358

Chang, J., & Le, T. (2010). Multiculturalism as a dimension of school climate: The impact on the academic achievement of Asian American and Hispanic youth. *Cultural Diversity and Ethnic Minority Psychology, 16,* 485–492.

Chassin, L., Presson, C. C., Sherman, S. J., Seo, D. C., & Macy, J. T. (2010). Implicit and explicit attitudes predict smoking cessation: Moderating effects of experienced failure to control smoking and plans to quit. *Psychology of Addictive Behaviors*, *24*(4), 670.

Chen, B., Vensteenkiste, M., Beyers, W., Boone, L., Deci, E., Kaap-Deeder, J., Duriez, B., Lens, W., Matos, L., Mouratidis, A., Ryan, R. M., Sheldon, K. M., Soenens, B., Van Petegem, S., & Verstuyf, J. (2014, November 12). Basic psychological need satisfaction, need frustration, and need strength across four cultures. *Motivation and Emotion*. http://psycnet.apa.org/index.cfm?fa=search.displayRecord&id=FE589B10-CBC6-0020-31 B0-7A5C7433870E&resultID=1 &page=1 & dbTab=all&search=true

Chen, B. B. (2018). An evolutionary life history approach to understanding greed. *Personality and Individual Differences, 127,* 74–78.

Chen, B. B., Shi, Z., & Sun, S. (2017). Life history strategy as a mediator between childhood environmental unpredictability and adulthood personality. *Personality and Individual Differences, 111*, 215–219.

Chen, J., & Wang, L. (2007). Locus of control and the three components of commitment to change. *Personality and Individual Differences, 42,* 503–512.

Chen, J. J. L., Chen, T., & Zheng, X. X. (2012). Parenting styles and practices among Chinese immigrant mothers with young children. *Early Child Development and Care*, *182*(1), 1–21.

Chen, L., & Unsworth, K. (2019). Cognitive complexity increases climate change belief. *Journal of Environmental Psychology*, *65*, 101316.

Chen, L., Zhang, Z. D., & Jia, W. T. (2020). When and why leaders' helping behavior promotes employees' thriving: Exploring the role of voice behavior and perceived leader's role overload. *Frontiers in Psychology*, *11*, 553512.

Chen, P. Y., Ho, W. C., Lo, C., & Yeh, T. P. (2021). Predicting ego integrity using prior ego development stages for older adults in the community. *International Journal of Environmental Research and Public Health*, *18*(18), 9490.

Cheng, C., Cheung, M. W. L., & Lo, B. C. (2016). Relationship of health locus of control with specific health behaviors and global health appraisal: A meta-analysis and effects of moderators. *Health Psychology Review*, *10*(4), 460–477. https://doi.org/10.1080/17437199.2016.1219672

Cheng, C., Cheung, S. F., Chio, J. H. M., & Chan, M. P. S. (2013). Cultural meaning of perceived control: A meta-analysis of locus of control and psychological symptoms across 18 cultural regions. *Psychological Bulletin, 139*(1), 152.

Cheng, S. (2009). Generativity in later life: Perceived respect from younger generations as a determinant of goal disengagement and psychological well-being. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 64B*(1), 45–54.

Chen, X., Li, F., Nydegger, L., Gong, J., Ren, Y., Dinaj-Koci, V., Sun, H., & Stanton, B. (2013). Brief Sensation Seeking Scale for Chinese—Cultural adaptation and psychometric assessment. *Personality and Individual Differences, 54*(5), 604–609. https://doi.org/10.1016/j.paid.2012.11.007.

Chen, X., Osborne, L. A., & Reed, P. (2020). Role of psychopathic personality traits on the micro-structure of free-operant responding: Impacts on goal-directed but not stimulus-drive responses in extinction. *Personality and Individual Differences*, *163*, 110055.

Chen, X. J., Geagea, A., Park, J., & Kwak, Y. (2020). Cultural modulation of early attentional responses to positive self-information: An ERP investigation of self-enhancement. *International Journal of Psychophysiology*, 158, 34–44.

Chentsova-Dutton, Y., Tsai, J., & Gotlib, I. (2010). Further evidence for the cultural norm hypothesis: Positive emotion in depressed and control European American and Asian American women. *Cultural Diversity and Ethnic Minority Psychology, 16,* 284–295.

Cherry, R., & Cherry, L. (1973, August 26). The Horney heresy. *New York Times Magazine,* p. 12ff.

Chesney, M. A., Ekman, P., Friesen, W. V., Black, G. W., & Hecker, M. H. L. (1997). Type A behavior pattern: Facial behavior and speech components. In P. Ekman & E. L. Rosenberg (Eds.), *What the face reveals* (pp. 456–466). Oxford University Press.

Cheung, F. (2009). The cultural perspectives in personality assessment. In J. Butcher (Ed.), *Oxford handbook of personality assessment* (pp. 44–56). Oxford University Press.

Chew, L. C., & Ang, C. S. (2021). The relationship among quiet ego, authenticity, self-compassion and life satisfaction in adults. *Current Psychology*, 1–11.

Chiao, J., & Blizinsky, K. (2010). Culture–gene coevolution of individualism–collectivism and the serotonin transporter gene. *Proceedings of the Royal Society of Biological Science, 277,* 529–537.

Chiesa, M. (2010). Research and psychoanalysis: Still time to bridge the great divide? *Psychoanalytic Psychology, 27*(2), 99–114.

Chiesa, R., Toderi, S., Dordoni, P., Henkens, K., Fiabane, E. M., & Setti, I. (2016). Older workers: Stereotypes and occupational self-efficacy. *Journal of Managerial Psychology, 31*(7), 1152–1166. https://doi.org/10.1108/JMP-11-2015-0390

Chiorri, C., Marsh, H. W., Ubbiali, A., & Donati, D. (2015). Testing the factor structure and measurement invariance across gender of the Big Five Inventory through exploratory structural equation modeling. *Journal of Personality Assessment*, *98*(1), 88–99. https://doi.org/10.1080/00223891.2015.1035381

Chirumbolo, A., & Leone, L. (2010). Personality and politics: The role of the HEXACO model of personality in predicting ideology and voting. *Personality and Individual Differences, 49*(1), 43–48.

Cho, S. A., & Cho, Y. S. (2020). Attentional orienting by non-informative cue is shaped via reinforcement learning. *Frontiers in Psychology*, *10*, 2884.

Chodorkoff, B. (1954). Self-perception, perceptual defense, and adjustment. *Journal of Abnormal and Social Psychology, 49,* 508–512.

Choi, E. J., Taylor, M. J., Hong, S.-B., Kim, C., Kim, J.-W., McIntyre, R. S., & Yi, S.-H. (2018). Gaming-addicted teens identify more with their cyber-self than their own self: Neural evidence. *Psychiatry Research: Neuroimaging*, *279*, 51–59. https://doi.org/10.1016/j.pscychresns.2018.05.012

Chopik, W. J., Kim, E. S., & Smith, J. (2018). An examination of dyadic changes in optimism and physical health over time. *Health Psychology*, 37(1), 42–50.

Chopik, W. J., Oh, J., Kim, E. S., Schwaba, T., Krämer, M. D., Richter, D., & Smith, J. (2020). Changes in optimism and pessimism in response to life events: Evidence from three large panel studies. *Journal of Research in Personality*, 88, 103985.

Chowdhury, M., & Amin, M. (2006). Personality and students' academic achievement: Interactive effects of conscientiousness and agreeableness on students' performance in principles of economics. *Social Behavior and Personality, 34,* 381–388.

Choy, W. C., & Moneta, G. B. (2002). The interplay of autonomy and relatedness in Hong Kong Chinese single mothers. *Psychology of Women Quarterly*, *26*(3), 186–199.

Christensen, A., Ehlers, S., Wiebe, J., Moran, P., Raichle, K., Ferneyhough, K., & Lawton, W. J. (2002). Patient personality and mortality: A 4-year prospective study of chronic renal insufficiency. *Health Psychology, 21,* 315–320.

Chuah, S., Drasgow, F., & Roberts, B. (2006). Personality assessment: Does the medium matter? No. *Journal of Research in Personality, 40,* 359–376.

Chuang, S., Lamb, M., & Hwang, C. (2006). Personality development from childhood to adolescence: A longitudinal study of ego-control and ego-resiliency in Sweden. *International Journal of Behavioral Development, 30*(4), 338–343.

Church, A., Katigbak, M., Mazuera, A., Rina, R., Brigida, C., Vargas-Flores, J., Ibáñez-Reyes, J., Wang, L., Alvarez, J., Wang, C., & Ortiz, F. (2014). A four-culture study of self-enhancement and adjustment using the social relations model: Do alternative conceptualizations and indices make a difference? *Journal of Personality and Social Psychology, 106,* 997–1014.

Church, A., Kayigbak, M., Locke, K., Zhang, H., Shen, J., Vargas-Flores, J., Ibáñez-Reyes, J., Tanaka-Matsumi, J., Curtis, G. J., Cabrera, H. F., Mastor, K. A., Alvarez, J. M., Ortiz, F. A., Simon, J.-Y. R., & Ching, C. M. (2013). Need satisfaction and well-being: Testing self-determination theory in eight cultures. *Journal of Cross-Cultural Psychology, 44,* 507–534.

Churchill, A., Taylor, J. A., & Parkes, R. (2015). The creation of a superstitious belief regarding putters in a laboratory-based golfing task. *International Journal of Sport and Exercise Psychology, 13*(4), 335–343.

Churchyard, J. S., Pine, K. J., Sharma, S., & Fletcher, B. (2013). Construction by interpersonal context and relationship to psychological outcomes. *Journal of Constructivist Psychology*, *26*(4), 306–315.

Ciarrochi, J., & Heaven, P. (2007). Longitudinal examination of the impact of Eysenck's psychoticism dimension on emotional well-being in teenagers. *Personality and Individual Differences, 42,* 597–608.

Ciarrochi, J., & Heaven, P. (2008). Learned social helplessness: The role of explanatory style in predicting social support during adolescence. *Journal of Child Psychology and Psychiatry, 49*(2), 1279–1286.

Cladellas, R., Muro, A., Vargas-Guzmán, E. A., Bastardas, A., & Gomà-i-Freixanet, M. (2017). Sensation seeking and high school performance. *Personality and Individual Differences*, *117*, 117–121. https://doi.org/10.1016/j.paid.2017.05.049

Clark, A. (2005). An early recollection of Albert Einstein: Perspectives on its meaning and his life. *Journal of Individual Psychology, 61,* 126–136.

Clark, A. J. (2009). Early recollections and object meanings. *Journal of Individual Psychology, 65*(2), 123–134.

Clark, J. (2010). Life as a source of theory: Erik Erikson's contributions, boundaries, and marginalities. In T. Miller (Ed.), *Handbook of stressful transitions across the lifespan* (pp. 59–83). Springer.

Clark, K. B. (1967). Implications of Adlerian theory for an understanding of civil rights problems and action. *Journal of Individual Psychology, 23*(2), 181.

Clark, K. E., & Ladd, G. W. (2000). Connectedness and autonomy support in parent–child relationships: Links to children's socioemotional orientation and peer relationships. *Developmental Psychology, 36*(4), 485–498. https://doi.org/10.1037/0012-1649.36.4.485

Clark, M., & Arnold, J. (2008). The nature, prevalence and correlates of generativity among men in middle career. *Journal of Vocational Behavior, 73,* 473–484.

Clemmens, E. R. (1987). Karen Horney, a reminiscence. In K. Horney (Ed.), *Final lectures* (pp. 107–115). Norton.

Clough, S. (2009). Computerized versus paper-and-pencil assessment of socially desirable responding: Score congruence, completion time, and respondent behavior. *Dissertation Abstracts International. Section A: Humanities & Social Sciences,* 4700.

Coan, R. W. (1972). Measurable components of openness to experience. *Journal of Consulting and Clinical Psychology, 39,* 346.

Cobb, S., Javanbakht, A., Khalifeh Soltani, E., Bazargan, M., & Assari, S. (2020). Racial difference in the relationship between health and happiness in the United States. *Psychology Research and Behavior Management*, 481–490.

Cobb-Clark, S., Kassenboehmer, S., & Schurer, S. (2014). Healthy habits: The connection between diet, exercise, and locus of control. *Journal of Economic Behavior and Organization, 98,* 1–28.

Cohen, J. B. (1967). An interpersonal orientation to the study of consumer behavior. *Journal of Marketing Research, 4,* 270–278.

Cokley, K. (2002). Testing Cross's racial identity model: An examination of the relationship between racial identity and internalized racialism. *Journal of Counseling Psychology, 49,* 476–483.

Colby, D., & Shifren, K. (2013). Optimism, mental health, and quality of life: A study among breast cancer patients. *Psychology, Health & Medicine, 18,* 10–20.

Cole, D. A., Warren, D. E., Dallaire, D. H., Lagrange, B., Travis, R., & Ciesla, J. A. (2007). Early predictors of helpless thoughts and behaviors in children: Developmental precursors to depressive cognitions. *Clinical Child Psychology and Psychiatry*, *12*(2), 295–312.

Coles, N. A., March, D. S., Marmolejo-Ramos, F., Larsen, J. T., Arinze, N. C., Ndukaihe, I. L., Willis, M. L., Foroni, F., Reggev, N., Mokady, A., Forscher, P. S., Hunter, J. F., Kaminski, G., Yüvrük, E., Kapucu, A., Nagy, T., Hajdu, N., Tejada, J., Freitag, R. M. K., ... & Liuzza, M. T. (2022). A multi-lab test of the facial feedback hypothesis by the Many Smiles Collaboration. *Nature Human Behaviour, 6*(12), 1731-1742.

Coles, R. (1998). Psychoanalysis: The American experience. In M. S. Roth (Ed.), *Conflict and culture* (pp. 140–151). New York: Knopf.

Colins, O. F., Fanti, K. A., Salekin, R. T., & Andershed, H. (2017). Psychopathic personality in the general population: Differences and similarities across gender. *Journal of Personality Disorders*, *31*(1), 49.

Collado, A., Felton, J., MacPherson, L., & Lejuez, C. (2014). Longitudinal trajectories of sensation seeking, risk taking propensity, and impulsivity across early to middle adolescence. *Addictive Behaviors, 39,* 1580–1588.

Collado, A., Risco, C. M., Banducci, A. N., Chen, K. W., MacPherson, L., & Lejuez, C. W. (2017). Racial differences in risk-taking propensity on the youth version of the Balloon Analogue Risk Task (BART-Y). *The Journal of Early Adolescence*, *37*(2), 222–235. https://doi-org.wake.idm.oclc.org/10.1177/0272431615596

Combs, D., Penn, D., & Fenigstein, A. (2002). Ethnic differences in subclinical paranoia: An expansion of norms of the paranoia scale. *Cultural Diversity and Ethnic Minority Psychology, 8,* 248–256.

Conkel-Ziebell, J. L., Gushue, G. V., & Turner, S. L. (2019). Anticipation of racism and sexism: Factors related to setting career goals for urban youth of color. *Journal of Counseling Psychology*, *66*(5), 588.

Connelly, B., & Ones, D. (2010). Another perspective on personality: Meta-analytic integration of observers' accuracy and predictive ability. *Psychological Bulletin, 136,* 1092–1122.

Conner, M., & Abraham, C. (2001). Conscientiousness and the theory of planned behavior: Toward a more complete model of the antecedents of intentions and behavior. *Personality and Social Psychology Bulletin, 27,* 1547–1561.

Constantine, M., Alleyne, V., Wallace, B., & Franklin-Jackson, D. (2006). Africentric cultural values: Their relation to positive mental health in African-American adolescent girls. *Journal of Black Psychology, 32,* 141–154.

Constantinople, A. (1969). An Eriksonian measure of personality development in college students. *Developmental Psychology, 1,* 357–372.

Contarello, A., & Sarrica, M. (2007). ICTs, social thinking and subjective well-being: The Internet and its representations in everyday life. *Computers in Human Behavior, 23,* 1016–1032.

Contreras, L., & del Carmen Cano, M. (2016). Child-to-parent violence: The role of exposure to violence and its relationship to social-cognitive processing. *The European Journal of Psychology Applied to Legal Context*, *8*(2), 43–50.

Conway, F., Magai, C., Springer, C., & Jones, S. (2008). Optimism and pessimism as predictors of physical and psychological health among grandmothers raising their grand children. *Journal of Research in Personality, 42,* 1352–1357.

Conway, M., & Holmes, A. (2004). Psychosocial stages and the accessibility of autobiographical memories across the life cycle. *Journal of Personality, 72,* 461–480.

Coolidge, F., Moor, C. J., Yamazaki, T. G., Stewart, S. E., & Segal, D. L. (2001). On the relationship between Karen Horney's tripartite neurotic type theory and personality disorder features. *Personality and Individual Differences, 30,* 1387–1400.

Coolidge, F., Segal, D., & Estey, A. (2010). *New measure of Karen Horney's tridimensional theory in children.* American Psychological Association Convention Presentation.

Coolidge, F. L., Segal, D. L., Benight, C. C., & Danielian, J. (2004). The predictive power of Horney's psychoanalytic approach: An empirical study. *The American Journal of Psychoanalysis, 64*, 363–374.

Corbett, S. (2009, September 20). The Holy Grail of the unconscious. *New York Times*.

Corby, B., Hodges, E., & Perry, D. (2007). Gender identity and adjustment in Black, Hispanic, and White preadolescents. *Developmental Psychology, 43,* 261–266.

Cordaro, D. T., Sun, R., Kamble, S., Hodder, N., Monroy, M., Cowen, A., Bai, Y., & Keltner, D. (2020). The recognition of 18 facial-bodily expressions across nine cultures. *Emotion*, *20*(7), 1292–1300. https://doi.org/10.1037/emo0000576.supp

Cornelius-White J. H. (2002). The phoenix of empirically supported therapy relationships: The overlooked person-centered basis. *Psychotherapy: Theory, Research, Practice, Training, 39*, 219–222.

Cornell, C. E., Rodin, J., & Weingarten, H. (1992). Stimulus-induced eating when satiated. *Physiology and Behavior, 45*, 695–704.

Corpuz, R., D'Alessandro, S., Adeyemo, J., Jankowski, N., & Kandalaft, K. (2020). Life history orientation predicts COVID-19 precautions and projected behaviors. *Evolutionary Psychology*. https://doi.org/10.3389/fpsyg.2020.01857

Corr, P. J. (2007). *Personality and psychology: Hans Eysenck's unifying themes*. The Psychologist.

Correa, T., Hinsley, A., & de Zuniga, H. (2010). Who interacts on the web? The intersection of users' personality and social media use. *Computers in Human Behavior, 26*(2)*,* 247–253.

Cortright, B., Kahn, M., & Hess, J. (2003). Speaking from the heart: Integral T-groups as a tool for training transpersonal psychotherapists. *Journal of Transpersonal Psychology*, *35*(2), 127–142.

Costa Galinha, I., Oishi, S., Pereira, C., & Wirtz, D. (2023). Personal values and life domain satisfaction predict global life satisfaction differently across cultures. *Journal of Social and Personal Relationships*, 02654075231173157.

Costa Jr., P. T., Terracciano, A., & McCrae, R. R. (2001). Gender differences in personality traits across cultures: Robust and surprising findings. *Journal of Personality and Social Psychology, 81,* 322–331.

Costa Porfírio, J. C., & Corrêa Varella, M. A. (2022). Testing the cognitive niche hypothesis with structural equation modeling: Different dark traits predict an evening-chronotype in males and females. *Current Psychology*, 1–10.

Costa, P. T., Jr., & McCrae, R. R. (1984). Personality as a lifelong determinant of well-being. In C. Z. Malatesta & C. E. Izard (Eds.), *Emotion in adult development* (pp. 141–158). Sage.

Costa, P. T., & McCrae, R. R. (1988). Personality in adulthood: A six-year longitudinal study of self-reports and spouse ratings on the NEO Personality Inventory. *Journal of Personality and Social Psychology, 54*(5), 853.

Costello, T. H., Bowes, S. M., & Lilienfeld, S. O. (2020). "Escape from freedom": Authoritarianism-related traits, political ideology, personality, and belief in free will/determinism. *Journal of Research in Personality*, *86*. https://doi.org/10.1016/j.jrp.2020.103957

Costescu, C., Vanderborght, B., & David, D. (2014). The effects of robot-enhanced psychotherapy: A meta-analysis. *Review of General Psychology, 18,* 127–136.

Cote, J. E., & Levine, C. (1988). The relationship between ego identity status and Erikson's notions of institutionalized moratoria, value orientation stage, and ego dominance. *Journal of Youth and Adolescence, 17,* 81–99.

Cotterill, B. F. (2022). The relationship between psychological birth-order position and personality type. *The Journal of Individual Psychology, 78*(2), 238–256. https://doi.org/10.1353/jip.2022.0027.

Couturier, J., & Lock, J. (2006). Denial and minimization in adolescents with anorexia nervosa. *International Journal of Eating Disorders, 39,* 212–216.

Cox, A., Weed, N., & Butcher, J. (2009). The MMPI-2: History, interpretation, & clinical issues. In J. Butcher (Ed.), *Oxford handbook of personality assessment* (pp. 250–276). Oxford University Press.

Cox, K., Wilt, J., Olson, B., & McAdams, D. (2010). Generativity, the Big Five, and psychosocial adaption in midlife adults. *Journal of Personality, 78*(4), 1185–1208.

Cramer, P. (2007). Longitudinal study of defense mechanisms: Late childhood to late adolescence. *Journal of Personality, 75,* 1–24.

Cramer, P. (2009). The development of defense mechanisms from pre-adolescence to early adulthood: Do IQ and social class matter? A longitudinal study. *Journal of Research in Personality, 43*(3), 464–471.

Cramer, P., & Block, J. (1998). Preschool antecedents of defense mechanism use in young adults: A longitudinal study. *Journal of Personality and Social Psychology, 74*(1), 159.

Crandall, J. E. (1981). *Theory and measurement of social interest: Empirical tests of Alfred Adler's concept.* Columbia University Press.

Crandall, J. E. (1984). Social interest as a moderator of life stress. *Journal of Personality and Social Psychology, 47,* 164–174.

Crawford, J. T., & Brandt, M. J. (2019). Who is prejudiced, and toward whom? The Big Five traits and generalized prejudice. *Personality and Social Psychology Bulletin*, *45*(10), 1455–1467.

Crawford, T., Cohen, P., Johnson, J., Sneed, J., & Brook, J. (2004). The course and psychological correlates of personality disorder symptoms in adolescence: Erikson's developmental theory revisited. *Journal of Youth and Adolescence, 33,* 373–387.

Cremen, S. N. (2019). Vocation as psyche's call: A depth psychological perspective on the emergence of calling through symptoms at midlife. *International Journal for Educational and Vocational Guidance*, *19*(1), 41–61. https://doi.org/10.1007/s10775-018-9367-4

Crewsdon, J. (1988). *By silence betrayed: Sexual abuse of children in America*. Boston: Little, Brown.

Critchfield, A. R., & Pula, J. (2015). On psychotherapy, LGBT identity, and cultural visibility: In conversation with Alison Bechdel. *Journal of Gay & Lesbian Mental Health*, *19*(4), 397–412.

Crocker, J., & Luhtanen, R. (2003). Level of self-esteem and contingencies of self-worth: Unique effects on academic, social, and financial problems in college students. *Personality and Social Psychology Bulletin, 29*, 701–712.

Crocker, J., & Park, L. (2004). The costly pursuit of self-esteem. *Psychological Bulletin, 130*, 392–414.

Crockett, W. H. (1965). Cognitive complexity and impression formation. In B. A. Maher (Ed.), *Progress in experimental personality research* (Vol. 2, pp. 47–90). Academic.

Crockett, W. H. (1982). The organization of construct systems: The organization corollary. *The construing person*, 62–95.

Crook, T., Raskin, A., & Eliot, J. (1981). Parent–child relationships and adult depression. *Child Development, 52,* 950–957.

Cross, J. R. (2022). An analysis of most important values among low-income, high-ability middle school students. *SENG Journal: Exploring the Psychology of Giftedness*, *1*(1), 7–19.

Cross, W., Grant, B., & Ventuneac, A. (2012). Black identity and well-being: Untangling race and ethnicity. In J. Sullivan & A. Esmail (Eds.), *African-American identity: Racial and cultural dimensions of the black experience* (pp. 125–146). Lexington Books/Rowan & Littlefield.

Crowe, M., Andel, R., Pedersen, N., Fratiglioni, L., & Gatz, M. (2006). Personality and risk of cognitive impairment 25 years later. *Psychology and Aging, 21,* 573–580.

Crowter, J. (2022). "To Be That Self Which One Truly Is": Trans Experiences and Rogers' Theory of Personality. *Person-Centered & Experiential Psychotherapies*, *21*(4), 293–308.

Crump, M., McDonnell, J., & Gureckis, T. (2013). Evaluating Amazon's Mechanical Turk as a tool for experimental behavioral research. *PLoS ONE, 8*(3). http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0057410

Cunningham, L. (2012, December 13). Myers-Briggs: Does it pay to know your type? *Washington Post*. https://www.google.com/#q=cunningham+myers-briggs+does+it+pay+to+know+your+type

Custers, R., & Aarts, H. (2010). The unconscious will: How the pursuit of goals operates outside of conscious awareness. *Science, 329,* 47–50.

Da'as, R. A., Schechter, C., & Qadach, M. (2020). School leaders' cognitive complexity: Impact on the Big 5 model and teachers' organizational citizenship behavior. *Journal of School Leadership*, *30*(5), 398–423.

Dada, G., Izu, S., Montebruno, C., Grau, A., & Feixas, G. (2017). Content analysis of the construction of self and others in women with bulimia nervosa. *Frontiers in Psychology*, *8*, 480.

Dailey, M., Joyce, C., Lyons, M., Kamachi, M., Ishi, H., Gyoba, J., & Cottrell, G. W. (2010). Evidence and a computational explanation of cultural differences in facial expression recognition. *Emotion, 10,* 874–893.

Dajani, D. R., & Uddin, L. Q. (2015). Demystifying cognitive flexibility: Implications for clinical and developmental neuroscience. *Trends in Neurosciences*, *38*(9), 571–578.

Dale, K. Y., Ødegård, A., Tschudi, F., Cromwell, R. L., Saunders, B., Elden, Å., & Holte, A. (2010). Cognitive complexity and dissociative identity disorder. *Journal of Constructivist Psychology*, *23*(2), 158–165.

Dalla, C., Edgecomb, C., Whetstone, A., & Shors, T. (2008). Females do not express learned helplessness like males do. *Neuropsychopharmacology, 33,* 1559–1569.

Dallery, J., Glenn, I., & Raiff, B. (2007). An Internet-based abstinence reinforcement treatment for cigarette smoking. *Drug and Alcohol Dependence, 86,* 230–238.

Damian, R. I., Spengler, M., Sutu, A., & Roberts, B. W. (2019). Sixteen going on sixty-six: A longitudinal study of personality stability and change across 50 years. *Journal of Personality and Social Psychology*, *117*(3), 674–695. https://doi.org/10.1037/pspp0000210

Dan, T., Jun, Z., & Ji-Liang, S. (2006). The influence factors of subjective well-being in older adults. *Chinese Mental Health Journal, 20,* 160–162.

Danner, D., Snowdon, D., & Friesen, W. (2001). Positive emotions in early life and longevity: Findings from the nun study. *Journal of Personality and Social Psychology, 80,* 804–813.

Daraei, M., & Ghaderi, A. (2012). Impact of education on optimism/pessimism. *Journal of the Indian Academy of Applied Psychology, 38,* 339–343.

Darling, C., Coccia, C., & Senatore, N. (2012). Women in midlife: Stress, health and life satisfaction. *Stress and Health, 28,* 31–40.

Dash, G. F., Slutske, W. S., Martin, N. G., Statham, D. J., Agrawal, A., & Lynskey, M. T. (2019). Big Five personality traits and alcohol, nicotine, cannabis, and gambling disorder comorbidity. *Psychology of Addictive Behaviors*, *33*(4), 420.

Datta Gupta, N., Etcoff, N. L., & Jaeger, M. M. (2016). Beauty in mind: The effects of physical attractiveness on psychological well-being and distress. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *17*(3), 1313–1325. https://doi.org/10.1007/s10902-015-9644-6

Datu, J. A. D., & King, R. B. (2016). Prioritizing positivity optimizes positive emotions and life satisfaction: A three-wave longitudinal study. *Personality and Individual Differences*, *96*, 111–114. https://doi.org/10.1016/j.paid.2016.02.069

Daugherty, D. A., Murphy, M. J., & Paugh, J. (2001). An examination of the Adlerian construct of social interest with criminal offenders. *Journal of Counseling and Development, 79,* 465–471.

Daukantaite, D., & Bergman, L. R. (2005). Childhood roots of women's subjective well-being. *European Psychologist, 10*(4), 287–297.

Daukantaitė, D., & Zukauskiene, R. (2012). Optimism and subjective well-being: Affectivity plays a secondary role in the relationship between optimism and global life satisfaction in the middle-aged women. Longitudinal and cross-cultural findings. *Journal of Happiness Studies*, *13*(1), 1–16.

Davidow, S., & Bruhn, A. R. (1990). Earliest memories and the dynamics of delinquency: A replication study. *Journal of Personality Assessment, 54,* 601–616.

Davis, P. J. (1987). Repression and the inaccessibility of affective memories. *Journal of Personality and Social Psychology, 53*(3), 585.

Dazzi, C. (2011). The Eysenck Personality Questionnaire–Revised (EPQ-R): A confirmation of the factorial structure in the Italian context. *Personality and Individual Differences, 50,* 790–794.

De Almeida, I., Uchida, Y., & Ellsworth, P. C. (2022), Sharing and non-sharing happiness: Evidence from cross-cultural studies in the United States and Japan. *Japanese Psychological Research*, 64, 170–180. https://doi.org/10.1111/jpr.12390

De Boer, B. J., Van Hooft, E. A., & Bakker, A. B. (2015). Self-control at work: Its relationship with contextual performance. *Journal of Managerial Psychology*, *30*(4), 406–421.

De Bolle, M., De Fruyt, F., McCrae, R. R., Löckenhoff, C. E., Costa Jr, P. T., Aguilar-Vafaie, M. E., Ahn, C.-K., Ahn, H.-N., Alcaly, L., Allik, J., Avdeveya, T. V., Bratko., Brunner-Sciarra, M., Cain, T. R., Chan, W., Chittcharat, N., Crawford, J. T., Fehr, R., . . . Terracciano, A. (2015). The emergence of sex differences in personality traits in early adolescence: A cross-sectional, cross-cultural study. *Journal of Personality and Social Psychology*, *108*(1), 171.

De Cremer, D., van Dijke, M., Schminke, M., De Schutter, L., & Stouten, J. (2018). The trickle-down effects of perceived trustworthiness on subordinate performance. *Journal of Applied Psychology, 103*(12), 1335–1357. https://doi.org/10.1037/apl0000339

de Jager, M., & Naudé, L. (2018). Antecedents of risk-taking behaviour among South African adolescents. *Journal of Psychology in Africa*, *28*(5), 382–388.

De Raad, B. (2000). *The Big Five personality factors: The psycholexical approach to personality*. Hogrefe & Huber.

De Raad, B., & Barelds, D. (2008). A new taxonomy of Dutch personality traits based on a comprehensive and unrestricted list of descriptors. *Journal of Personality and Social Psychology, 94*(2), 347–364.

De Raad, B., Morales-Vives, F., Barelds, D. P., Van Oudenhoven, J. P., Renner, W., & Timmerman, M. E. (2016). Values in a cross-cultural triangle: A comparison of value taxonomies in the Netherlands, Austria, and Spain. *Journal of Cross-Cultural Psychology*, *47*(8), 1053–1075. https://doi.org/10.1177/0022022116659698

De Ridder, D., & Gillebaart, M. (2017). Lessons learned from trait self-control in well-being: Making the case for routines and initiation as important components of trait self-control. *Health Psychology Review*, *11*(1), 89–99.

De Vries, J. H., Spengler, M., Frintrup, A., & Mussel, P. (2021). Personality development in emerging adulthood—how the perception of life events and mindset affect personality trait change. *Frontiers in Psychology*, *12*, 671421.

de Vries, R. E., de Vries, A., & Feij, J. A. (2009). Sensation seeking, risk-taking, and the HEXACO model of personality. *Personality and Individual Differences, 47*(6), 536–540.

De Vries, R. E. (2013). The 24-item brief HEXACO inventory (BHI). *Journal of Research in Personality*, *47*(6), 871–880.

Debast, I., van Alphen, S. P., Rossi, G., Tummers, J. H., Bolwerk, N., Derksen, J. J., & Rosowsky, E. (2014). Personality traits and personality disorders in late middle and old age: Do they remain stable? A literature review. *Clinical Gerontologist, 37*(3), 253–271.

DeCarvalho, R. J. (1999). Otto Rank, the Rankian circle in Philadelphia, and the origin of Carl Rogers' person-centered psychotherapy. *History of Psychology, 2,* 132–148.

Deci, E. (2011). Self-determination theory and its relation to positive psychology. *Second World Congress of Positive Psychology Invited Speaker Abstracts.* http://psycnet.apa.org/doi/10.1037/e537892012-001

Deci, E., & Ryan, R. (2009). Self-determination theory: A consideration of human motivational universals. In P. Corr & G. Matthews (Eds.), *The Cambridge handbook of personality psychology* (pp. 441–446). Cambridge University Press.

Deci, E., & Ryan, R. (2012). Self-determination theory. In P. Van Lange, A. Kruglanski, & E. Higgins (Eds.), *Handbook of theories of social psychology* (Vol. 1, pp. 416–436). Thousand Oaks, CA: Sage.

Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*, 19–43.

Dee, T. S. (2007). Teachers and the gender gaps in student achievement. *Journal of Human Resources*, *42*(3), 528–554.

Defoe, I. N., Dubas, J. S., Figner, B., & Van Aken, M. A. (2015). A meta-Analysis on age differences in risky decision making: Adolescents versus children and adults. *Psychological Bulletin*, *141*(1), 48. https://doi.org/10.1037/a0038088

Del Giudice, M. (2015). Gender differences in personality and social behavior. In J. D. Wright (Ed.), *International encyclopedia of the social and behavioral sciences* (2nd ed.) (pp. 750–756). Elsevier

Del Giudice, M. (2016). The life history model of psychopathology explains the structure of psychiatric disorders and the emergence of the p factor: A simulation study. *Clinical Psychological Science, 4*(2), 299–311.

Delahaij, R., & Van Dam, K. (2017). Coping with acute stress in the military: The influence of coping style, coping self-efficacy and appraisal emotions. *Personality and Individual Differences*, *119*, 13–18.

Delevi, R., & Weisskirch, R. (2013). Personality factors as predictors of sexting. *Computers in Human Behavior, 29,* 2589–2594.

Delhey, J., & Dragolov, G. (2015, February 13). Happier together: Social cohesion and subjective well-being in Europe. *International Journal of Psychology*. http://onlinelibrary.wiley.com/doi/10.1002/ijop.12149/abstract

Delhomme, P., Chaurand, N., & Paran, F. (2012). Personality predictors of speeding in young drivers: Anger versus sensation seeking. *Transportation Research Part F: Traffic Psychology and Behavior, 15,* 654–666.

Delmonte, M. M. (2000). Retrieved memories of childhood sexual abuse. *British Journal of Medical Psychology, 73,* 1–13.

DeNavas-Walt, C., & Proctor, B. D. (2014). *Income and poverty in the United States: 2013 (Current Population Reports P60–249)*. U.S. Census Bureau.

Deneui, D. (2001). Construction of a neurotic competitiveness inventory. *Program of the 73rd Annual Meeting, Midwestern Psychological Association.* http://psycnet.apa.org/index.cfm?fa=search.displayRecord&id=2E808324-C075-90B2-6502-AF81462DCC3A&resultID=1 &page=1 &dbT ab=all& search=true

DeNeve, K., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective wellbeing. *Psychological Bulletin, 124,* 197–229.

Deng, X., Ding, X., Cheng, C., & Chou, H. M. (2016). Feeling happy and sad at the same time? Subcultural differences in experiencing mixed emotions between Han Chinese and Mongolian Chinese. *Frontiers in Psychology*, *7*, 1692. https://doi.org/10.3389/fpsyg.2016.01692

Denis, D. (2009). Book review: *The Cattell controversy: Race, science, and ideology*, by W. Tucker. University of Illinois Press, 2009. *Journal of the History of the Behavioral Sciences, 45,* 390–392.

DePaulo, B. M. (1993). The ability to judge others from their expressive behaviors. In K. H. Craik, R. Hogan, & R. N. Wolfe (Eds.), *Fifty years of personality psychology* (pp. 197–206). Plenum Press.

DePhilippis, D., Quintieri, P., Noble, H., Reyes, J., & Akundi, S. (2008). *Token economy reduces aggression among cognitively impaired patients in a psychiatric hospital.* American Psychological Association Convention Presentation.

Devi, B., Pradhan, S., Giri, D., & Baxodirovna, N. L. (2022). Concept of social cognitive theory and its application in the field of medical and nursing education: Framework to guide research. *Journal of Positive School Psychology*, 5161–5168.

Dewar, D. L., Lubans, D. R., Plotnikoff, R. C., & Morgan, P. J. (2012). Development and evaluation of social cognitive measures related to adolescent dietary behaviors. *The International Journal of Behavioral Nutrition and Physical Activity, 9*. https://doi.org/10.1186/1479-5868-9-36

Diamond, L. M., & Huebner, D. M. (2012). Is good sex good for you? Rethinking sexuality and health. *Social and Personality Psychology Compass*, *6*(1), 54–69.

DiClemente, C. C., & Crisafulli, M. A. (2022). Relapse on the road to recovery: Learning the lessons of failure on the way to successful behavior change. *Journal of Health Service Psychology*, *48*(2), 59–68.

Diehl, M., Chui, H., Hay, E., Lumley, M., Gruhn, D., & Labouvie-Vief, G. (2014). Change in coping and defense mechanisms across adulthood: Longitudinal findings in a European-American sample. *Developmental Psychology, 50,* 634–648.

Diener, E., & Chan, M. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being, 3,* 1–43.

Diener, E., Diener, M., & Diener, C. (1995). Factors predicting the subjective well-being of nations. *Journal of Personality and Social Psychology, 69,* 851–864.

Diener, E., Gohm, C., Suh, E. M., & Oishi, S. (2000). Similarity of the relations between marital status and subjective wellbeing across cultures. *Journal of Cross Cultural Psychology, 31,* 419–436.

Diener, E., Lucas, R., Oishi, S., & Suh, E. M. (2002). Looking up and looking down: Weighting good and bad information in life satisfaction judgments. *Personality and Social Psychology Bulletin, 28,* 437–445.

Diener, E., Ng, W., Harter, J., & Arora, R. (2010). Wealth and happiness across the world: Material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive feeling. *Journal of Personality and Social Psychology, 99,* 52–61.

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology, 54,* 403–425.

Diener, E., Seligman, M. E. P., Choi, H., & Oishi, S. (2018). Happiest people revisited. *Perspectives on Psychological Science, 13*(2), 176–184. https://doi.org/10.1177/1745691617697077

Diener, E., Suh, E. M., Smith, H. L., & Shao, L. (1995). National differences in reported subjective well-being. *Social Indicators Research, 34,* 7–32.

Diesendruck, G., & HaLevi, H. (2006). The role of language, appearance, and culture in children's social category-based induction. *Child Development*, *77*(3), 539–553. https://doi.org/10.1111/j.1467-8624.2006.00889.x

Diesendruck, G., & Markson, L. (2011). Childrens' assumption of the conventionality of culture. *Child Development Perspectives*, *5*(3), 189–195.

Diesendruck, G., & Perez, R. (2015). Toys are me: Children's extension of self to objects. *Cognition*, *134*, 11–20. https://doi.org/10.1016/j.cognition.2014.09.010

Di Giuseppe, M., Nepa, G., Prout, T. A., Albertini, F., Marcelli, S., Orrù, G., & Conversano, C. (2021). Stress, burnout, and resilience among healthcare workers during the COVID-19 emergency: The role of defense mechanisms. *International Journal of Environmental Research and Public Health*, *18*(10), 5258.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology, 41,* 417–440.

Dignan, M. (1965). Ego identity and maternal identification. *Journal of Personality and Social Psychology, 1,* 476–483.

Dinella, L., Devita, A., & Weisgram, E. (2013). Pink fighter jets and blue tea sets: The role of toy type and toy color in adults' gender attitudes. *American Psychological Association 2013 Convention Presentation.* http://psycnet.apa.org/index.cfm?fa=search.displayRecord&id=6CE83045-0E89-35E3-FAF6-6B3C2D3FFABC&resultID=1&page=1&dbTab=all&search=true

Dinges, C. W., Varnon, C. A., Cota, L. D., Slykerman, S., & Abramson, C. I. (2017). Studies of learned helplessness in honey bees (*Apis mellifera ligustica*). *Journal of Experimental Psychology: Animal Learning and Cognition, 43*(2), 147–158. https://doi.org/10.1037/xan0000133

Dingfelder, S. (2005). Closing the gap for Latino patients. *Monitor on Psychology, 36*(1), 58–61.

DiRienzo, C., Das, J., Synn, W., Kitts, J., & McGrath, K. (2010). The relationship between MBTI and academic performance: A study across academic disciplines. *Journal of Psychological Type, 70*(5), 53–66.

Dithurbide, L., & Feltz, D. (2012). Self-efficacy and collective efficacy. In G. Tenenbaum, R. Eklund, & A. Kamata (Eds.), *Measurement in sport and exercise psychology* (pp. 251–263). Human Kinetics.

Doherty, A., & Kelly, B. (2010). Social and psychological correlates of happiness in 17 European countries. *Irish Journal of Psychological Medicine, 27*(3), 130–134.

Dolan, P., Kavetsos, G., & Vlaev, I. (2014). The happiness workout. *Social Indicators Research, 119,* 1363–1377.

Dömötör, Z., Ruíz-Barquín, R., & Szabo, A. (2016). Superstitious behavior in sport: A literature review. *Scandinavian Journal of Psychology, 57*(4), 368–382.

do Nascimento, G. S., Walsh-Monteiro, A., & Gouveia, A., Jr. (2016). A reliable depression-like model in zebrafish (*Danio rerio*): Learned helplessness. *Psychology & Neuroscience, 9*(3), 390–397. https://doi.org/10.1037/pne0000057

Donaldson, G. (1996). Between practice and theory: Melanie Klein, Anna Freud, and the development of child analysis. *Journal of the History of the Behavioral Sciences, 32,* 160–176.

Donnellan, B., Trzesniewski, K., Robins, R., Moffitt, T., & Caspi, A. (2005). Low self-esteem is related to aggression, antisocial behavior, and delinquency. *Psychological Science, 16*, 328–335.

Doom, J. R., Vanzomeren-Dohm, A. A., & Simpson, J. A. (2016). Early unpredictability predicts increased adolescent externalizing behaviors and substance use: A life history perspective. *Development and Psychopathology, 28*(4pt2), 1505–1516.

dos Reis Soares, F. H., Neufeld, C. B., & Mansur-Alves, M. (2020). Multidimensional perfectionism predicted by personality traits and parental bonding: An empirical study with a Brazilian sample. *Trends in Psychology*, *28*(4), 622–639.

Downes, P. E., Crawford, E. R., Seibert, S. E., Stoverink, A. C., & Campbell, E. M. (2021). Referents or role models? The self-efficacy and job performance effects of perceiving higher performing peers. *Journal of Applied Psychology*, *106*(3), 422.

Downey, D. B. (2001). Number of siblings and intellectual development: The resource dilution explanation. *American Psychologist, 56,* 497–504.

Drakopoulos, S., & Grimani, K. (2013). Maslow's needs hierarchy and the effect of income on happiness levels. In F. Sarracino (Ed.), *The happiness compass: Theories, actions and perspectives for well-being* (pp. 295–309). Nova Science Publishers.

Drexler, P. (2013, September 16). What your selfies say about you. *Psychology Today Online.* http://www.psychologytoday.com/blog/our-gender-ourselves/201309/what-your-selfies-say-about-you

Drouin, M., Miller, D., Wehle, S. M., & Hernandez, E. (2016). Why do people lie online? "Because everyone lies on the internet." *Computers in Human Behavior, 64,* 134–142.

Dru, V. (2003). Relationships between an ego orientation scale and a hypercompetitive scale: Their correlates with dogmatism and authoritarianism factors. *Personality and Individual Differences, 35,* 1509–1524.

Du, J., Shin, Y., & Choi, J. (2015). Convergent perceptions of organizational efficacy among team members and positive work outcomes in organizational teams. *Journal of Occupational and Organizational Psychology, 88,* 178–202.

Dubois, L., Diasparra, M., Bedard, B., Kaprio, J., Fontaine-Bisson, B., Tremblay, R., Boivin, M., & Pérusse, D. (2013). Genetic and environmental influences on eating behaviors in two-and-a-half and nine-year-old children: A longitudinal twin study. *International Journal of Behavioral Nutrition and Physical Activity, 10, Article 134.* http://www.ncbi.nlm.nih.gov/pubmed/24313977

Duck, S. W., & Spencer, C. (1972). Personal constructs and friendship formation. *Journal of Personality and Social Psychology, 23,* 40–45.

Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2014). Self-control in school-age children. *Educational Psychologist*, *49*(3), 199–217.

Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2016). Situational strategies for self-control. *Perspectives on Psychological Science, 11*(1), 35–55.

Duek, O., Shahar, G., Osher, Y., & Kofman, O. (2018). Role of self-criticism in reward and punishment probabilistic learning. *Personality and Individual Differences*, *134*, 155–163.

Duell, N., Steinberg, L., Chein, J., Al-Hassan, S. M., Bacchini, D., Lei, C., Chaudhary, N., Di Giunta, L., Dodge, K. A., Fanti, K. A., Lansford, J. E., Malone, P. S., Oburu, P., Pastorelli, C., Skinner, A. T., Sorbring, E., Tapanya, S., Tirado, L. M. U., & Alampay, L. P. (2016). Interaction of reward seeking and self-regulation in the prediction of risk taking: A cross-national test of the dual systems model. *Developmental Psychology*, *52*(10), 1593. http://dx.doi.org/10.1037/dev0000152

Dufner, M., Denissen, J., Sedikides, C., Van Zalk, M., Meeus, W. H., & Van Aken, M. (2013). Are Actual and Perceived Intellectual Self–enhancers Evaluated Differently by Social Perceivers? *European Journal of Personality, 27*(6), 621–633.

Dufner, M., Gebauer, J. E., Sedikides, C., & Denissen, J. J. (2019). Self-enhancement and psychological adjustment: A meta-analytic review. *Personality and Social Psychology Review*, *23*(1), 48–72. https://doi.org/10.1177/1088868318756467

Dumka, L., Gonzales, N., Wheeler, L., & Millsap, R. (2010). Parenting self-efficacy and parenting practices over time in Mexican American families. *Journal of Family Psychology, 24,* 522–531.

Duncan, L. E., & Agronick, G. W. (1995). The intersection of life stage and social events: Personality and life outcomes. *Journal of Personality and Social Psychology, 69,* 558–568.

Dune, T., Caputi, P., Walker, B. M., Olcon, K., MacPhail, C., Firdaus, R., & Thepsourinthone, J. (2022). Construing non-White and White clients: Mental health

practitioners' superordinate constructs related to Whiteness and non-Whiteness in Australia. *Journal of Constructivist Psychology, 35*(3), 1037–1057. https://doi.org/10.1080/10720537.2021.1916662.

Dunlop, P., Morrison, D., Koenig, J., & Silcox, B. (2012). Comparing the Eysenck and HEXACO models of personality in the prediction of adult delinquency. *European Journal of Personality, 26,* 194–202.

Dunn, J. C., Whelton, W. J., & Sharpe, D. (2006). Maladaptive perfectionism, hassles, coping, and psychological distress in university professors. *Journal of Counseling Psychology*, *53*(4), 511–523. https://doi.org/10.1037/0022-0167.53.4.511

Durgel, E., Leyendecker, B., Yagmurlu, B., & Harwood, R. (2009). Sociocultural influences on German and Turkish mothers' long-term socialization goals. *Journal of Cross-Cultural Psychology, 19,* 834–853.

Dzuka, J., & Dalbert, C. (2006). The belief in a just world and subjective well-being in old age. *Aging and Mental Health, 10,* 439–444.

Eagle, M. N. (1988). How accurate were Freud's case histories? [Review of *Freud and the Rat Man*]. *Contemporary Psychology, 33,* 205–206.

Earp, B. (2012). Early Academic Self Concepts and the Racial Achievement Gap. *Journal of Social & Psychological Sciences, 5*(1).

Eaton, S., Livingston, J., & McAdoo, H. (2010). Cultivating consciousness among Black women: Black nationalism and self-esteem revisited. *Journal of Black Studies, 40*, 812–822.

Eaves, L. J., Eysenck, H. J., & Martin, N. G. (1989). *Genes, culture, and personality: An empirical approach.* Academic Press.

Eckardt, M. (2006). Karen Horney: A portrait. *American Journal of Psychoanalysis, 66,* 105–108.

Eckstein, D., Aycock, K. J., Sperber, M. A., McDonald, J., Van Wiesner III, V., Watts, R. E., & Ginsburg, P. (2010). A review of 200 birth-order studies: Lifestyle characteristics. *Journal of Individual Psychology, 66*(4).

Eckstein, D., & Kaufman, J. (2012). The role of birth order in personality: An enduring intellectual legacy of Alfred Adler. *Journal of Individual Psychology, 68,* 60–61.

Edman, J., Adams, S., Park, M., & Irwin, C. (2010). Who gets confidential care? Disparities in a national sample of adolescents. *Journal of Adolescent Health, 46,* 393–395.

Edmundson, M. (2007). *The death of Sigmund Freud: The legacy of his last days*. New York: Bloomsbury.

Einhorn, E. (2020, April 8). African Americans may be dying from COVID-19 at a higher rate. Better data is essential, experts say. https://www.nbcnews.com/news/nbcblk/african-americans-may-be-dying-covid-19-higher-ratebetter-n1178011

Eissler, K. R. (1971). *Talent and genius: The fictitious case of Tausk contra Freud*. New York: Quadrangle Books.

Eklund, J., & Fritzell, J. (2014). Keeping delinquency at bay: The role of the school context for impulsive and sensation-seeking adolescents. *European Journal of Criminology, 11,* 682–701.

Ekman, P., Matsumoto, D., & Friesen, W. V. (1997). Facial expressions in affective disorders. In P. Ekman & E. L. Rosenberg (Eds.), *What the face reveals* (pp. 331–341). Oxford University Press.

El-Anzi, F. O. (2005). Academic achievement and its relationship with anxiety, self-esteem, optimism, and pessimism in Kuwaiti students. *Social Behavior and Personality: An International Journal*, *33*(1), 95–104.

Ellenberger, H. F. (1970). *The discovery of the unconscious: The history and evolution of dynamic psychiatry*. Basic Books.

Ellenberger, H. F. (1978). Carl Gustav Jung: His historical setting. In H. Reise (Ed.), *Historical explorations in medicine and psychiatry* (pp. 142–150). Springer.

Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. *Journal of Personality and Social Psychology, 67*, 382–394.

Ellis, B. J., Figueredo, A. J., Brumbach, B. H., & Schlomer, G. L. (2009). Fundamental dimensions of environmental risk: The impact of harsh versus unpredictable environments on the evolution and development of life history strategies. *Human Nature*, *20*, 204–268.

Ellis, B. J., Simpson, J. A., & Campbell, L. (2002). Trait-specific dependence in romantic relationships. *Journal of Personality*, 70, 611–659. https://doi.org/10.1111/1467-6494.05019

Ellis, R. A., & Taylor, M. S. (1983). Role of self-esteem within the job search process. *Journal of Applied Psychology, 68*, 632–640.

Elms, A. C. (1994). *Uncovering lives: The uneasy alliance of biography and psychology*. New York: Oxford University Press.

Elms, A. C. (2010). Jung's biggest book. Book review of *The Red Book, Liber Novus,* by C. G. Jung. New York: Norton, 2009. *PsycCRITIQUES, 55*(21), Article 3.

Elson, M., & Ferguson, C. (2014). The ideological rigidity of social-cognitive theories of media violence and a response to Bushman and Huesmann. *European Psychologist, 19,* 68–75.

Emanuel, G. (2014, March 5). Post a survey on Mechanical Turk and watch the results roll in. *NPR Radio.* http://www.npr.org/blogs/alltechconsidered/2014/03/05/279669610/post-a-survey-on-mechanical-turk-and-watch-the-results-roll-in

Endo, Y., Heine, S. J., & Lehman, D. R. (2000). Culture and positive illusions in close relationships: How my relationships are better than yours. *Personality and Social Psychology Bulletin, 26,* 1571–1586.

Ene, I., Wong, K. K. Y., & Salali, G. D. (2022). Is it good to be bad? An evolutionary analysis of the adaptive potential of psychopathic traits. *Evolutionary Human Sciences*, *4*, e37.

Engarhos, P., Shohoudi, A., Crossman, A., & Talwar, V. (2020). Learning through observing: Effects of modeling truth-and lie-telling on children's honesty. *Developmental Science*, *23*(1), e12883.

Engelhardt, L. E., Mann, F. D., Briley, D. A., Church, J. A., Harden, K. P., & Tucker-Drob, E. M. (2016). Strong genetic overlap between executive functions

and intelligence. *Journal of Experimental Psychology: General*, *145*(9), 1141.

Ent, M. R., Baumeister, R. F., & Tice, D. M. (2015). Trait self-control and the avoidance of temptation. *Personality and Individual Differences*, *74*, 12–15.

Erikson, E. H. (1950). *Childhood and society.* Norton.

Erikson, E. H. (1959). Identity and the life cycle: Selected papers [Monograph 1]. *Psychological Issues,* 1.

Erikson, E. H. (1968). *Identity: Youth and crisis.* Norton.

Erikson, E. H. (1975). *Life history and the historical moment.* Norton.

Erikson, E. H., Erikson, J. M., & Kivnick, H. Q. (1986). *Vital involvement in old age*. Norton.

Ertekin, Z., & Berument, S. K. (2021). Self-concept development of children in institutional care, alternative care types and biological family homes: Testing differential susceptibility. *Applied Developmental Science*, *25*(4), 307–321.

Escamilla, M., Sandoval, H., Calhoun, V., & Ramirez, M. (2018). Brain activation patterns in response to complex triggers in the Word Association Test: Results from a new study in the United States. *Journal of Analytical Psychology*, *63*(4), 484–509.

Escorial, S., & Martín-Buro, C. (2012). The role of personality and intelligence in assortative mating. *The Spanish Journal of Psychology, 15*(2), 680–687.

Esnard, C., & Roques, M. (2014). Collective efficacy: A resource in stressful occupational contexts. *European Review of Applied Psychology, 64,* 203–211.

Esseilly, R., Rat-Fischer, L., O'Regan, L., & Fagard, J. (2013). Understanding the experimenter's intention improves 16-month-olds' observational learning of the use of a novel tool. *Cognitive Development, 28,* 1–9.

Ettema, D., & Smajic, I. (2015). Walking, places and wellbeing. *The Geographical Journal, 181*(2), 102–109. http://www.jstor.org/stable/43868634

Evans, B. E., Stam, J., Huizink, A. C., Willemen, A. M., Westenberg, P. M., Branje, S., Meeus, W., Koot, H. M, & van Lier, P. A. (2016). Neuroticism and extraversion in relation to physiological stress reactivity during adolescence. *Biological Psychology*, *117*, 67–79.

Evans, G., & Stecker, R. (2004). Motivational consequences of environmental stress. *Journal of Environmental Psychology, 24,* 143–165.

Evans, R. I. (1968). *B. F. Skinner: The man and his ideas*. Dutton.

Everton, W., Mastrangelo, P., & Jolton, J. (2005). Personality correlates of employees' personal use of work computers. *Cyberpsychology and Behavior, 8,* 143–153.

Exner, J. E., Jr. (1993). *The Rorschach: A comprehensive system: Vol. 1. Basic foundations* (3rd ed.). Wiley.

Ey, S., Hadley, W., Allen, D. N., Palmer, S., Klosky, J., Deptula, D., Thomas, J., & Cohen, R. (2005). A new measure of children's optimism and pessimism: The Youth Life Orientation Test. *Journal of Child Psychology and Psychiatry, 46,* 548–558.

Eysenck, H. J. (1980). Autobiography. In G. Lindzey (Ed.), *A history of psychology in autobiography* (Vol. 7, pp. 153–187). W. H. Freeman.

Eysenck, H. J. (1983). A biometrical-genetical analysis of impulsive and sensation seeking behavior. In M. Zuckerman (Ed.), *Biological bases of sensation seeking, impulsivity, and anxiety* (pp. 1–27). Erlbaum.

Eysenck, H. J. (1990a). Genetic and environmental contributions to individual differences: The three major dimensions of personality. *Journal of Personality, 58,* 245–261.

Eysenck, H. J. (1990b). Biological dimensions of personality. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 244–276). Guilford Press.

Eysenck, H. J. (1997). Personality and experimental psychology: The unification of psychology and the possibility of a paradigm. *Journal of Personality and Social Psychology, 73,* 1224–1237.

Eysenck, H. J., & Eysenck, M. W. (1985). *Personality and individual differences: A natural science approach.* Plenum Press.

Eysenck, H. J., & Eysenck, S. (1963). *Eysenck personality inventory.* Educational and Industrial Testing Service.

Eysenck, H. J., & Gudjonsson, G. H. (1989). *The causes and cures of criminality.* Plenum Press.

Eysenck, W. (2009). Personality, intelligence, and longevity: A cross-cultural perspective. *Social Behavior and Personality, 37* (2), 149–154.

Fagan, A., Wright, E., & Pinchevsky, G. (2014). The protective effects of neighborhood collective efficacy on adolescent substance use and violence following exposure to violence. *Journal of Youth & Adolescence, 43,* 1498–1512.

Faith, M. S., Wong, F. Y., & Carpenter, K. M. (1995). Group sensitivity training: Update, meta-analysis, and recommendations. *Journal of Counseling Psychology, 3,* 390–399.

Falbo, T. (1978). Only children and interpersonal behavior: An experimental and survey study. *Journal of Applied Social Psychology, 8,* 244–253.

Falbo, T., & Polit, D. F. (1986). Quantitative review of the only child literature: Research evidence and theory development. *Psychological Bulletin, 100,* 176–189.

Fallby, J., Hassmen, P., Kentta, G., & Durand-Burand, N. (2006). Relationship between locus of control, sense of coherence, and mental skills in Swedish elite athletes. *International Journal of Sport & Exercise Psychology, 44,* 111–120.

Fan, H., Li, D., Zhou, W., Jiao, L., Liu, S., & Zhang, L. (2020). Parents' personality traits and children's subjective well-being: A chain mediating model. *Current Psychology*, 1–12.

Fan, H., Lin, M., Bai, C., Huang, P., Chiang, Y., & Chiu, W. (2014). Validation of the Chinese-language brief sensation seeking scale: Implications for risky riding behaviors of parental motorcyclists and their child passengers. *Accident Analysis & Prevention, 73,* 333–339.

Fan, W., & Yan, Z. (2010). Factors affecting response rates of the web survey: A systematic review. *Computers in Human Behavior, 26,* 132–139.

Fancher, R. (2000). Snapshots of Freud in America, 1899–1999. *American Psychologist, 55,* 1025–1028.

Fang, X., van Kleef, G. A., Kawakami, K., & Sauter, D. A. (2021). Cultural differences in perceiving transitions in emotional facial expressions: Easterners show greater contrast effects than westerners. *Journal of Experimental Social Psychology*, *95*, 104143.

Farley, F. (2000). Obituary: Hans J. Eysenck (1916–1997). *American Psychologist, 55,* 674–675.

Farmer, A., Kidwell, B., & Hardesty, D. M. (2021). The politics of choice: Political ideology and intolerance of ambiguity. *Journal of Consumer Psychology*, *31*(1), 6–21.

Faßbender, K., Wiebe, A., & Bates, T. C. (2019). Physical and cultural inheritance enhance agency, but what are the origins of this concern to establish a legacy? A nationally-representative twin study of Erikson's concept of generativity. *Behavior Genetics*, *49*, 244–257.

Feixas, G., Geldschläger, H., & Neimeyer, R. A. (2002). Content analysis of personal constructs. *Journal of Constructivist Psychology, 15*(1), 1–19. https://doi.org/10.1080/107205302753305692

Feixas, G., Moggia, D., Niño-Robles, N., Aguilera, M., Montesano, A., & Salla, M. (2021). Measuring cognitive rigidity in construing self and others with the repertory grid technique: Further test of the cognitive model for depression. *International Journal of Cognitive Therapy*, *14,* 656–670. https://doi.org/10.1007/s41811-021-00122-w

Feixas, G., Saúl, L. A., & Avila-Espada, A. (2009). Viewing cognitive conflicts as dilemmas: Implications for mental health. *Journal of Constructivist Psychology, 22*(2), 141–169.

Fenech, G., & Thomson, G. (2015). Defence against trauma: Women's use of defence mechanisms following childbirth-related trauma. *Journal of Reproductive and Infant Psychology*, *33*(3), 268–281.

Ferguson, C. J. (2010). A meta-analysis of normal and disordered personality across the life span. *Journal of Personality and Social Psychology, 98*(4), 659.

Ferguson, E. (2000). Hypochondriacal concerns and the five factor model of personality. *Journal of Personality, 68,* 705–724.

Fernandez, E. J., & Martin, A. L. (2021). Animal training, environmental enrichment, and animal welfare: A history of behavior analysis in zoos. *Journal of Zoological and Botanical Gardens*, *2*(4), 531–543.

Ferrand, C., Martinent, G., & Durmaz, N. (2014). Psychological need satisfaction and well-being in adults aged 80 and older living in residential homes: Using a self-determination theory perspective. *Journal of Aging Studies, 30*, 104–111.

Ferrer, E., & McArdle, J. J. (2004). An experimental analysis of dynamic hypotheses about cognitive abilities and achievement from childhood to early adulthood. *Developmental Psychology*, *40*(6), 935.

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford University Press.

Fiebert, M. S. (1997). In and out of Freud's shadow: A chronology of Adler's relationship with Freud. *Individual Psychology, 53,* 241–269.

Figueredo, A. J., Jacobs, W. J., Gladden, P. R., Bianchi, J., Patch, E. A., Kavanagh, P. S., Beck, C. A., Sotomayor-Peterson, M., Yunfan, J., & Li, N. P. (2018). Intimate partner violence, interpersonal aggression, and life history strategy. *Evolutionary Behavioral Sciences, 12*(1), 1–31.

Figueredo, A. J., & Rushton, J. P. (2009). Evidence for shared genetic dominance between the general factor of personality, mental and physical health, and life history traits. *Twin Research and Human Genetics, 12*, 555–563.

Figueredo, A. J., Vásquez, G., Brumbach, B. H., & Schneider, S. M. (2004). The heritability of life history strategy: The K-factor, covitality, and personality. *Social Biology, 51*, 121–143.

Figueredo, A. J., Vásquez, G., Brumbach, B. H., & Schneider, S. M. (2007). The K-factor, covitality, and personality: A psychometric test of life history theory. *Human Nature*, *18*, 47–73.

Figueredo, A. J., Vásquez, G., Brumbach, B. H., Sefcek, J. A., Kirsner, B. R., & Jacobs, W. J. (2005). The K-factor: Individual differences in life history strategy. *Personality and Individual Differences*, *39*, 1349–1360.

Filippello, P., Buzzai, C., Costa, S., Orecchio, S., & Sorrenti, L. (2020). Teaching style and academic achievement: The mediating role of learned helplessness and mastery orientation. *Psychology in the Schools*, *57*(1), 5–16.

Filippello, P., Harrington, N., Costa, S., Buzzai, C., & Sorrenti, L. (2018). Perceived parental psychological control and school learned helplessness: The role of frustration intolerance as a mediator factor. *School Psychology International*, *39*(4), 360–377.

Fincham, F. D., & May, R. W. (2017). Prayer and forgiveness: Beyond relationship quality and extension to marriage. *Journal of Family Psychology*, *31*(6), 734.

Fincham, F. D., & May, R. W. (2019). Self-forgiveness and well-being: Does divine forgiveness matter? *The Journal of Positive Psychology*, *14*(6), 854–859.

Finlay J., Franke T., McKay H., Sims-Gould J. (2015). Therapeutic landscapes and wellbeing in later life: Impacts of blue and green spaces for older adults. *Health Place*. 97–106. https://doi.org/10.1016/j.healthplace.2015.05.001

Fino, E., & Sun, S. (2022). "Let us create!": The mediating role of creative self-efficacy between personality and mental well-being in university students. *Personality and Individual Differences*, *188*, 111444. https://doi.org/10.1016/j.paid.2021.111444

Fiorella, L., & Mayer, R. E. (2016). Effects of observing the instructor draw diagrams on learning from multimedia messages. *Journal of Educational Psychology, 108*(4), 528–546. https://doi.org/10.1037/edu0000065

Firth, A. M., Cavallini, I., Sütterlin, S., & Lugo, R. G. (2019). Mindfulness and self-efficacy in pain perception, stress and academic performance. The influence of

mindfulness on cognitive processes. *Psychology Research and Behavior Management*, 565–574.

Fisher, J. W., & Francis, L. (2013). Happiness is a thing called stable extraversion: Testing Eysenck's thesis among three samples in Australia. In F. Sarracino (Ed.), *The happiness compass: Theories, actions and perspectives for well-being* (pp. 31–36). Nova Science Publishers.

Fisher, P. A., & Robie, C. (2019). A latent profile analysis of the Five Factor model of personality: A constructive replication and extension. *Personality and Individual Differences*, *139*, 343–348. https://doi.org/10.1016/j.paid.2018.12.002

Fiske, K., & Pillemer, D. (2006). Adult recollections of earliest childhood dreams: A cross-cultural study. *Memory, 14,* 57–67.

Fleeson, W., & Jayawickreme, E. (2015). Whole trait theory. *Journal of Research in Personality*, *56*, 82–92.

Fleeson, W., & Jayawickreme, E. (2021). Whole traits: Revealing the social-cognitive mechanisms constituting personality's central variable. In *Advances in Experimental Social Psychology* (Vol. 63, pp. 69–128). Academic Press.

Fleeson, W., Malanos, A. B., & Achille, N. M. (2002). An intra-individual process approach to the relationship between extraversion and positive affect: Is acting extraverted as "good" as being extraverted? *Journal of Personality and Social Psychology*, *83*(6), 1409.

Floderus-Myrhed, B., Pedersen, N., & Rasmuson, I. (1980). Assessment of heritability for personality, based on a short form of the Eysenck personality inventory: A study of 12,898 twin pairs. *Behavior Genetics, 10,* 153–162.

Flores, R. P. (2016). Dominant interests in the personality of industrial design students within their educational practice. *Journal of Educational and Developmental Psychology*, *6*(1), 1–29.

Fluckinger, C. D. (2014). Big five measurement via Q-sort: An alternative method for constraining socially desirable responding. *SAGE Open*, *4*(3), 2158244014547196.

Foels, R., & Reid, L. D. (2010). Gender differences in social dominance orientation: The role of cognitive complexity. *Sex Roles, 62*(9–10), 684–692.

Fogel, S. M., Ray, L. B., Sergeeva, V., De Koninck, J., & Owen, A. M. (2018). A novel approach to dream content analysis reveals links between learning-related dream incorporation and cognitive abilities. *Frontiers in Psychology*, *9*, 1398.

Foley, Y., Matheny, K., & Curlette, W. (2008). A cross-generational study of Adlerian personality traits and life satisfaction in mainland China. *Journal of Individual Psychology, 64*(3), 324–338.

Fong, M., & Mashek, D. (2014, June 21). Self-esteem among Asian American undergraduates: The role of dorm connectedness. *Society for the Psychological Study of Ethnic Minority Issues Presentation.* https://center.uoregon.edu/APA/Div45/2014/program/daily_schedule.php?day=Saturday

Forgeard, M., & Seligman, M. (2012). Seeing the glass half full: A review of the causes and consequences of optimism. *Pratiques Psychologiques*, *18*(2), 107–120.

Fortuna, K., & Knafo, A. (2014). Parental and genetic contributions to prosocial behavior during childhood. In L. M. Padilla-Walker & G. Carlo (Eds.), *Prosocial development: A multidimensional approach* (pp. 70–89). Oxford University Press.

Foster, C. (2007). Confidence man [Albert Bandura].

Frable, D. E. S. (1997). Gender, racial, ethnic, sexual, and class identities. *Annual Review of Psychology, 48,* 139–162.

Francis, L., & Datoo, F. (2012). Inside the mosque: A study in psychological type profiling. *Mental Health, Religion & Culture, 15,* 1037–1046.

Francis, L., Yablon, Y., & Robbins, M. (2013). Psychology of emotions, motivations and actions. In F. Sarracino (Ed.), *The happiness compass: Theories, actions and perspectives for wellbeing* (pp. 17–29). Nova Science Publishers.

Frank, M. L., & Shoshana, A. (2019). "It was a kind of togetherness feeling": An exploration of social interest in early recollections. *The Journal of Individual Psychology*, *75*(1), 42–57. https://doi.org/10.1353/jip.2019.0003

Frank, T., Turenshine, H., & Sullivan, S. (2010). *Birth order's effect on personality, intelligence, and achievement: Same-family siblings.* American Psychological Association 2010 Convention Presentation. San Diego, California.

Franklin-Jackson, D., & Carter, R. (2007). The relationships between race-related stress, racial identity, and mental health for Black Americans. *Journal of Black Psychology, 33,* 5–26.

Fransella, F., & Neimeyer, R. (2003). George Alexander Kelly: The man and his theory. In F. Fransella (Ed.), *International handbook of personal construct psychology* (pp. 21–31). Wiley.

Franz, C. E., McClelland, D. C., & Weinberger, J. (1991). Childhood antecedents of conventional social accomplishment in midlife adults: A 36-year prospective study. *Journal of Personality and Social Psychology, 60,* 586–595.

Frederickson, B. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56,* 218–226.

Freed, R., & Tompson, M. (2011). Predictors of parental locus of control in mothers of pre-and early adolescents. *Journal of Clinical and Adolescent Psychology, 40,* 100–110.

Freeman, D. (2013, March 20). B. F. Skinner, behavioral scientist who invented "Skinner Box," remembered by his daughter. *Huffington Post.* http://www.huffingtonpost.com/news/bf-skinner/

Freeman, D., Aquino, K., & McFerran, B. (2009). Overcoming beneficiary race as an impediment to charitable donations: Social dominance orientation, the experience of moral elevation, and donation behavior. *Personality and Social Psychology Bulletin, 35,* 72–84. http://dx.doi.org/10.1177/0146167208325415

Freeman, J., Rule, N., & Ambady, N. (2009). Culture shapes a mesolimbic response to signals of dominance and subordinations that associate with behavior. *Neuroscience, 47*(1), 353–359.

French, D., Olander, E., Chisholm, A., & McSharry, J. (2014). Which behavior change techniques are most effective at increasing older adults' self-efficacy and physical activity behavior? A systematic review. *Annals of Behavioral Medicine, 48,* 225–234.

French, J., Whitley, K., Altgelt, E., & Meltzer, A. L. (2020). Attachment anxiety in young adulthood is associated with childhood unpredictability and predicts intentions to engage in unprotected sex. *Personality and Individual Differences*, *159*.

French, S., & Chavez, E. (2010). The relationship of ethnicity-related stressors and Latino ethnic identity to well-being. *Hispanic Journal of Behavioral Sciences, 32,* 410–428.

French, S., Seidman, E., Allen, L., & Aber, J. (2006). The development of ethnic identity during adolescence. *Developmental Psychology, 42,* 1–10.

Freud, S. (1914). On the history of the psychoanalytic movement. In *Standard edition* (Vol. 14, pp. 3–66). London: Hogarth Press.

Freud, S. (1925). An autobiographical study. In *Standard edition* (Vol. 20). London: Hogarth Press.

Freud, S. (1940). An outline of psychoanalysis. In *Standard edition* (Vol. 23, pp. 141–207). London: Hogarth Press.

Freud, S. (1954). *The origins of psychoanalysis: Letters to Wilhelm Fliess, drafts and notes: 1887–1902.* M. Bonaparte, A. Freud, & E. Kris (Eds.). New York: Basic Books.

Freud, S. (1963). *Psychoanalysis and faith: The letters of Sigmund Freud and Oskar Pfister*. H. Meng & E. Freud (Eds.). New York: Basic Books.

Freud, S. (1985). *The complete letters of Sigmund Freud to Wilhelm Fliess, 1887–1904.* J. M. Masson (Ed.). Cambridge, MA: Belknap Press of Harvard University.

Freud, S., & Jung, C. G. (1974). *The Freud/Jung letters.* W. McGuire (Ed.). Princeton University Press.

Frick, W. B. (2000). Remembering Maslow: Reflections on a 1968 interview. *Journal of Humanistic Psychology, 40*, 128–147.

Friedman, H., & Martin, L. (2011). *The longevity project: Surprising discoveries for health and long life from the landmark eight-decade study*. Hudson Street Press.

Friedman, H. S., Kern, M., & Reynolds, C. (2010). Personality and health, subjective well-being, and longevity. *Journal of Personality, 78*(1), 179–216.

Friedman, L. J. (1996). Psychological advice in the public realm in America, 1940–1970 [Review of the book *The Romance of American Psychology*]. *Contemporary Psychology, 41,* 219–222.

Friedman, L. J. (1999). *Identity's architect: A biography of Erik H. Erikson*. Simon & Schuster.

Frost, D. M., & Forrester, C. (2013). Closeness discrepancies in romantic relationships: Implications for relational well-being, stability, and mental health. *Personality and Social Psychology Bulletin*, *39*(4), 456–469.

Fu, G., Heyman, G. D., Qian, M., Guo, T., & Lee, K. (2016). Young children with a positive reputation to maintain are less likely to cheat. *Developmental Science*, *19*(2), 275–283.

Fukama, M., & Mizuochi, F. (2011). On the effect of the experience of sports activities on ego identity. *6th ASPASP International Congress on Sport Psychology, Taipei, Taiwan, November 11–13, 2011.* http://psycnet.apa.org/index.cfm? fa=search.searchResults

Fulker, D. W., Eysenck, S. B., & Zuckerman, M. (1980). A genetic and environmental analysis of sensation seeking. *Journal of Research in Personality, 14*(2), 261–281.

Funder, D. C. (2001). Personality. *Annual Review of Psychology, 52,* 83–110.

Furnham, A., Eysenck, S., & Saklofske, D. (2010). The Eysenck personality measures: Fifty years of scale development. In G. Boyle, G. Matthews, & D. Saklofske (Eds.), *The SAGE handbook of personality theory and assessment: Vol. 2. Personality measurement and testing* (pp. 199–218). Sage.

Furr, R. M., & Funder, D. C. (2018). Persons, situations, and person-situation interactions. *Handbook of Personality: Theory and Research*, 4.

Gackenbach, J., Kuruvilla, B., & Dopko, R. (2009). Video game play and dream bizarreness. *Dreaming, 29,* 218–231.

Gafner, G. (2012). *Subliminal: How your unconscious mind rules your behavior.* New York: Pantheon.

Galambos, N., Barker, E., & Krahn, H. (2006). Depression, self-esteem, and anger in emerging adulthood: Seven-year trajectories. *Developmental Psychology, 42,* 350–365.

Galambos, N. L., Krahn, H. J., Johnson, M. D., & Lachman, M. E. (2020). The U shape of happiness across the life course: Expanding the discussion. *Perspectives on Psychological Science*, *15*(4), 898–912.

Galbraith, T., & Conner, B. T. (2015). Religiosity as a moderator of the relation between sensation seeking and substance use for college-aged individuals. *Psychology of Addictive Behaviors*, *29*(1), 168.

Gale, C., Booth, T., Mottus, R., Kuh, R., & Deary, I. (2013). Neuroticism and extraversion in youth predict mental wellbeing and life satisfaction 40 years later. *Journal of Research in Personality, 47,* 687–697.

Gander, F., Proyer, R. T., & Ruch, W. (2016). Positive psychology interventions addressing pleasure, engagement, meaning, positive relationships, and accomplishment increase well-being and ameliorate depressive symptoms: A randomized, placebo-controlled online study. *Frontiers in Psychology*, *7*, 686. https://doi.org/10.3389/fpsyg.2016.00686

Ganiban, J., Saudino, K., Ulbricht, J., Neiderhiser, J., & Reiss, D. (2008). Stability and change in temperament during adolescence. *Journal of Personality and Social Psychology, 95*(1), 222–236.

Ganzach, Y. (2021). Antecedents of interest and the investment of fluid intelligence in the formation of crystalized intelligence. *Frontiers in Psychology*, *12*, 679504.

Gao, M., Xiao, C., Cao, Y., Yu, B., Li, S., & Yan, H. (2017). Associations between sexual sensation seeking and AIDS-related knowledge, attitudes and behaviors among young men who have sex with men in China. *Psychology, Health & Medicine*, *22*(5), 596–603.

Gao, X., & Maurer, D. (2010). A happy story: Developmental changes in children's sensitivity to facial expressions of varying intensities. *Journal of Experimental Child Psychology, 107*(2), 67–86.

Garcia, D., & Silkstrom, S. (2014). The dark side of Facebook: Semantic representation of status updates predict the Dark Triad of personality. *Personality and Individual Differences, 67,* 92–96.

García, L. F., Aluja, A., Rossier, J., Ostendorf, F., Glicksohn, J., Oumar, B., Bellaj, T., Ruch, W., Wang, W., Kövi, Z., Ścigała, D., Čekrlija, Đ., Stivers, A. W., Di Blas, L., Valdivia, M., Ben Jemaa, S., Atitsogbe, K. A., & Hansenne, M. (2021). Exploring the stability of HEXACO-60 structure and the association of gender, age, and social position with personality traits across 18 countries. *Journal of Personality*, *90*(2), 256–276. https://doi.org/10.1111/jopy.12664

Garcia, S., Tully, E., Tarantino, N., South, S., Iacono, W., & McGue, M. (2013). Changes in genetic and environmental influences on trait anxiety from middle adolescence to early adulthood. *Journal of Affective Disorders, 151,* 46–53.

García-Hermoso, A., Hormazábal-Aguayo, I., Fernández-Vergara, O., Olivares, P. R., & Oriol-Granado, X. (2020). Physical activity, screen time and subjective well-being among children. *International Journal of Clinical and Health Psychology*, *20*(2), 126–134.

García-Mieres, H., Niño-Robles, N., Ochoa, S., & Feixas, G. (2019). Exploring identity and personal meanings in psychosis using the repertory grid technique: A systematic review. *Clinical Psychology & Psychotherapy, 26*(6), 717–733. https://doi.org/10.1002/cpp.2394

García-Mieres, H., Villaplana, A., López-Carrilero, R., Grasa, E., Barajas, A., Pousa, E., Feixas, G., & Ochoa, S. (2020). The role of personal identity on positive and negative symptoms in psychosis: A study using the repertory grid technique. *Schizophrenia Bulletin*, *46*(3), 572–580.

Gardiner, G., Guillaume, E., Stauner, N., Bae, J., Han, G., Moon, J., Bronin, I., Ivanova, C., Cheng, J. T., De Kock, F., Graf, S., Hřebíčková, M., Halama, P., Hong, R., Izdebski, P., Kulich, C., Lorenzi-Cioldi, F., Penke, L., Szarota, P., . . . Funder, D. (2019). Assessing personality across 13 countries using the California Adult Q-set. *International Journal of Personality Psychology*, *5*, 1–17. https://doi.org/10.21827/ijpp.5.35039

Gardner, H. (1993). *Creating minds.* New York: Basic Books.

Gardner, M. M., Grimm, J. T., & Conner, B. T. (2021). Examining the role of risk compensation in extreme sports. *Journal of Sport and Exercise Psychology*, *43*(3), 215–222. https://doi.org/10.1123/jsep.2020-0159

Gardner, W. L., & Martinko, M. J. (1996). Using the Myers-Briggs Type Indicator to study managers: A literature review and research agenda. *Journal of Management*, *22*(1), 45–83.

Gardner, W. L., Pickett, C. L., & Brewer, M. B. (2000). Social exclusion and selective memory: How the need to belong influences memory for social events. *Personality and Social Psychology Bulletin, 26,* 486–496.

Garn, A. C., & Simonton, K. L. (2020). Young adults' short-term trajectories of moderate physical activity: Relations with self-evaluation processes. *Frontiers in Psychology*, *11*, 2079.

Gaskin, C. J., Andersen, M. B., & Morris, T. (2010). Sport and physical activity in the life of a man with cerebral palsy: Compensation for disability with psychosocial benefits and costs. *Psychology of Sport and Exercise, 11*(3), 197–205.

Gaskins, S., & Paradise, R. (2010). Learning through observation in daily life. In D. Lancy, J. Bock, & S. Gaskins (Eds.), *The anthropology of learning in childhood* (pp. 85–117). AltaMira Press.

Gates, L., Lineberger, M. R., Crockett, J., & Hubbard, J. (1988). Birth order and its relationship to depression, anxiety, and self-concept test scores in children. *Journal of Genetic Psychology, 149,* 29–34.

Gay, P. (1988). *Freud: A life for our time.* Norton.

Gencoz, T., & Ozlale, Y. (2004). Direct and indirect effects of social support on psychological well-being. *Social Behavior and Personality, 32,* 449–458.

Gendlin, E. T., & Tomlinson, T. M. (1967). The process conception and its measurement. In C. R. Rogers, E. T. Gendlin, D. J. Kiesler, & C. B. Truax (Eds.), *The therapeutic relationship and its impact: A study of psychotherapy with schizophrenics.* University of Wisconsin Press.

Gendron, M., Roberson, D., van der Vyver, J., & Barrett, L. (2014). Perceptions of emotion from facial expressions are not culturally universal: Evidence from a remote culture. *Emotion, 14,* 251–262.

Geng, Y., Sai, X., Jonason, P. K., Yang, M., Zhu, X., Gu, J., & Kong, H. (2021). Childhood adversity is associated with adulthood white blood cell count through narcissism. *Personality and Individual Differences, 174*, 110662.

Gentile, B., Twenge, J., & Campbell, W. (2010). Birth cohort differences in self-esteem, 1988–2008: A cross-temporal meta-analysis. *Review of General Psychology, 14,* 261–268.

Gentile, D. A., Anderson, C. A., Yukawa, S., Ihori, N., Saleem, M., Ming, L. K., Shibuya, A., Liau, A. K., Khoo, A., Bushman, B. J., Huesmann, L. R., & Sakamoto, A. (2009). The effects of prosocial video games on prosocial behaviors: International evidence from correlational, longitudinal, and experimental

studies. *Personality and Social Psychology Bulletin, 35,* 752–763. http://dx.doi.org/10.1177/0146167209333045

Gentile, D. A., Lynch, P. J., Linder, J. R., & Walsh, D. A. (2004). The effects of violent video game habits on adolescent hostility, aggressive behaviors, and school performance. *Journal of Adolescence*, *27*(1), 5–22.

Gentzler, A., Oberhauser, A., Westerman, S., & Nadorff, D. (2011). College students' use of electronic communication with parents: Links to loneliness, attachment, and relationship quality. *Cyberpsychology, Behavior, and Social Networking, 14,* 71–74.

George, K., Baechtold, J., Frost, R., & Campbell, J. (2006). Sensation seeking, aggression, and reckless behavior in high school students, college students, and adults. *Perceptual and Motor Skills, 103,* 801–802.

Gershoff, E. T., & Bitensky, S. H. (2007). The case against corporal punishment of children: Converging evidence from social science research and international human rights law and implications for US public policy. *Psychology, Public Policy, and Law*, *13*(4), 231.

Gerson, J., Plagnol, A. C., & Corr, P. J. (2017). Passive and active Facebook use measure (PAUM): Validation and relationship to the reinforcement sensitivity theory. *Personality and Individual Differences, 117,* 81–90. https://doi.org/10.1016/j.paid.2017.05.034

Gerstorf, D., Hülür, G., Wagner, G. G., Kunzmann, U., & Ram, N. (2018). Terminal change across facets of affective experience and domain satisfaction: Commonalities, differences, and bittersweet emotions at the end of life. *Developmental Psychology*, *54*(12), 2382.

Gerstorf, D., Ram, N., Estabrook, R., Schupp, J., Wagner, G., & Lindenberger, U. (2008). Life satisfaction shows terminal decline in old age: Longitudinal evidence from the German Socio-Economic Panel study (SOEP). *Developmental Psychology, 44*(4), 1148–1159.

Gerstorf, D., Ram, N., Mayraz, G., Hidajat, M., Lindenberger, U., Wagner, G. G., & Schupp, J. (2010). Late-life decline in well-being across adulthood in Germany, the United Kingdom, and the United States: Something is seriously wrong at the end of life. *Psychology and Aging*, *25*, 477–485.

Gfellner, B., & Armstrong, H. (2012). Ego development, ego strengths and ethnic identity among first nation adolescents. *Journal of Research on Adolescence, 22,* 225–234.

Giammarco, E., & Vernon, P. (2014). Vengeance and the Dark Triad: The role of empathy and perspective taking in trait forgiveness. *Personality and Individual Differences, 67,* 23–29.

Gianfranchi, E., Tagliabue, M., Spoto, A., & Vidotto, G. (2017). Sensation seeking, non-contextual decision making, and driving abilities as measured through a moped simulator. *Frontiers in Psychology*, *8*, 2126.

Gibbons, F., Blanton, H., Gerrard, M., Buunk, B., & Eggleston, T. (2000). Does social comparison make a difference? Optimism as a moderator of the relation between comparison level and academic performance. *Personality and Social Psychology Bulletin, 26,* 637–648.

Gibson, B., & Sanbonmatsu, D. (2004). Optimism, pessimism, and gambling: The downside of optimism. *Personality and Social Psychology Bulletin, 30,* 149–160.

Gibson, B., Thompson, J., Hou, B., & Bushman, B. J. (2016). Just "harmless entertainment"? Effects of surveillance reality TV on physical aggression. *Psychology of Popular Media Culture*, *5*(1), 66. https://doi.org/10.1037/ppm0000040

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76,* 569–582.

Gieser, L., & Wyatt-Gieser, J. (2013, August 3). *Survival of the Thematic Apperception Test.* Paper presented at the American Psychological Association Convention. http://www.histor-yofpsych.org/images /Division_26_APA_Convention_Program_2013

Gillaspy, J. (2009). *Misbehavior and the relationship between the Brelands and B. F. Skinner*. American Psychological Association Convention Presentation.

Gillaspy, J., Brinegar, J., & Bailey, R. (2014). Operant psychology makes a splash-in marine mammal training (1955–1965). *Journal of the History of the Behavioral Sciences, 50,* 231–246.

Gillipsie, J. M., & Allport, G. W. (1955). *Youth's outlook on the future (a cross-national study)*. Doubleday & Company.

Gilman, R. (2001). The relationship between life satisfaction, social interest, and frequency of extracurricular activities among adolescent students. *Journal of Youth and Adolescence, 30,* 749–767.

Gilman, R., & Huebner, E. (2006). Characteristics of adolescents who report very high life satisfaction. *Journal of Youth and Adolescence, 35,* 311–319.

Gilman, S. (2001). Karen Horney, M. D., 1885–1962. *American Journal of Psychiatry, 158,* 1205.

Giltay, E. J., Kamphuis, M. H., Kalmijn, S., Zitman, F. G., & Kromhout, D. (2006). Dispositional optimism and the risk of cardiovascular death. *Archives of Internal Medicine*, *166*(4), 431–436.

Giltay, E. J., Zitman, F., & Kromhout, D. (2006). Dispositional optimism and the risk of depressive symptoms during 15 years of follow-up: The Zutphen Elderly study. *Journal of Affective Disorders*, *91*(1), 45–52.

Giuntella, O., McManus, S., Mujcic, R., Oswald, A. J., Powdthavee, N., & Tohamy, A. (2023). The midlife crisis. *Economica*, *90*(357), 65–110.

Givertz, M., & Segrin, C. (2014). The association between over-involved parenthood and young adults' self-efficacy: Psychological entitlement and family communication. *Communication Research, 41,* 1111–1136.

Gjerde, P. F., & Cardilla, K. (2009). Developmental implications of openness to experience in preschool children: Gender differences in young adulthood. *Developmental Psychology*, *45*(5), 1455.

Gladden, P. R., & Cleator, A. M. (2017). Slow life history strategy predicts six moral foundations. *Law and Human Behavior*.

Gladden, P. R., Sisco, M., & Figueredo, A. J. (2008). Sexual coercion and life-history strategy. *Evolution and Human Behavior, 29,* 319–326.

Gladwell, M. (2004, September 20). Annals of psychology: Personality plus. *New Yorker,* pp. 42–48.

Glanz, K., Rimer, B. K., & Viswanath, K. (2015). *Health behavior: Theory, research, and practice* (5th ed.). Jossey-Bass.

Glicksman, E. (2013). Transgender today. *Monitor on Psychology, 44,* 36–41.

Glicksohn, J., & Naor-Ziv, R. (2016). Personality profiling of pilots: Traits and cognitive style. *International Journal of Personality Psychology*, *2*, 7–14.

Glucksberg, S., & King, L. J. (1967). Motivated forgetting mediated by implicit verbal chaining: A laboratory analog of repression. *Science, 158,* 517–519.

Glynn, L. M., Stern, H. S., Howland, M. A., Risbrough, V. B., Baker, D. G., Nievergelt, C. M., Baram, T. Z., & Davis, E. P. (2019). Measuring novel antecedents of mental illness: The Questionnaire of Unpredictability in Childhood. *Neuropsychopharmacology, 44*(5), 876.

Goby, V. (2006). Personality and online/offline choices: MBTI profiles and favored communication modes in a Singapore study. *Cyberpsychology and Behavior, 9,* 5–13.

Gocłowska, M. A., Ritter, S. M., Elliot, A. J., & Baas, M. (2019). Novelty seeking is linked to openness and extraversion, and can lead to greater creative performance. *Journal of Personality*, *87*(2), 252–266. https://doi.org/10.1111/jopy.12387

Goddard, M. J. (2018). Extending B. F. Skinner's selection by consequences to personality change, implicit theories of intelligence, skill learning, and language. *Review of General Psychology, 22*(4), 421–426.

Gold Medal Award for Life Achievement in Psychological Science (1997). *American Psychologist, 52*(8), 797–799. https://doi.org/10.1037/0003-066X.52.8.797

Goldberg, L. R. (1990). An alternative "description of personality": The Big-Five factor structure. *Journal of Personality and Social Psychology*, *59*(6), 1216.

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, *48*(1), 26.

Goldfried, M. (2007). What has psychotherapy inherited from Carl Rogers? *Psychotherapy, Theory, Research, Practice, Training, 44*(3), 249–252.

Goleman, D. (1987). BF Skinner: On his best behavior. *The New York Times.*

Gollan, J., McCloskey, M., Hoxha, D., & Coccaro, E. (2010). How do depressed and healthy adults interpret nuanced facial expressions? *Journal of Abnormal Psychology, 119,* 804–810.

Gomes, C. M. A., Golino, H. F., & Menezes, I. G. (2014). Predicting school achievement rather than intelligence: Does metacognition matter? *Psychology*, *5*(09), 1095–1110.

Gomez, V., Krings, F., Bangerter, A., & Grob, A. (2009). The influence of personality and life events on subjective wellbeing from a life span perspective. *Journal of Research in Personality, 43,* 345–354.

Gomez-Baya, D., & Lucia-Casademunt, A. M. (2018). A self-determination theory approach to health and well-being in the workplace: Results from the Sixth European Working Conditions Survey in Spain. *Journal of Applied Social Psychology*, *48*(5), 269–283.

Gondar, J. (2017). Trauma and subjectivity: A South American perspective. *The American Journal of Psychoanalysis*, *77*(1), 1–6.

Gondar, J. (2020). The disavowal of racism in Brazil. *International Forum of Psychoanalysis*, *29*(3), 159–163, https://doi.org/10.1080/0803706X.2019.1699252

Gönül, G., & Paulus, M. (2021). Children's reasoning about the efficiency of others' actions: The development of rational action prediction. *Journal of Experimental Child Psychology*, *204*. https://doi.org/10.1016/j.jecp.2020.105035

Gonzalez, J. S., Shreck, E., Psaros, C., & Safren, S. A. (2015). Distress and type 2 diabetes-treatment adherence: A mediating role for perceived control. *Health Psychology*, *34*(5), 505.

Gonzales-Backen, M. A., Dumka, L. E., Millsap, R. E., Yoo, H. C., Schwartz, S. J., Zamboanga, B. L., Weisskirch, R. S., Rodriguez, L., Castillo, L. G., Kim, S. Y., Brown, E. J., Whitbourne, S. K., & Vazsonyi, A. T. (2015). The role of social and personal identities in self-esteem among ethnic minority college students. *Identity (Mahwah, N.J.)*, *15*(3), 202–220. https://doi.org/10.1080/15283488.2015.1055532

Gonzales-Iglesias, B., Gomez-Fraguela, J., & Luengo, M. (2014). Sensation seeking and drunk driving: The mediational role of social norms and self-efficacy. *Accident Analysis & Prevention, 71,* 22–28.

Good, C., Rattan, A., & Dweck, C. S. (2012). Why do women opt out? Sense of belonging and women's representation in mathematics. *Journal of Personality and Social Psychology*, *102*(4), 700.

Goodman, L., Smith, P., Ivancevich, S., & Lundberg, S. (2014). Actions speak louder than personalities: Effects of Facebook content on personality perceptions. *North American Journal of Psychology, 16,* 105–120.

Gore, J. S., Griffin, D. P., & McNierney, D. (2016). Does internal or external locus of control have a stronger link to mental and physical health? *Psychological Studies*, *61*, 181–196. https://doi.org/10.1007/s12646-016-0361-y

Goritz, A. (2014). Frequency of typical dream themes in most recent dreams: An online study. *Dreaming, 24,* 57–66.

Gosling, S., Gaddis, S., & Vazire, S. (2007). *Personality impressions based on Facebook profiles*. Proceedings of the International Conference on Weblogs and Social Media.

Gosling, S., Sandy, C., & Potter, J. (2010). Personalities of self-identified "dog people" and "cat people." *Anthrozoos, 23,* 213–222.

Gosling, S., Vazire, S., Srivastava, S., & John, O. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions. *American Psychologist, 59,* 93–104.

Gosling, S. D., Rentfrow, P. J., & Swann Jr, W. B. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*(6), 504–528.

Gøtzsche-Astrup, O., Jakobsen, J., & Furnham, A. (2016). The higher you climb: Dark side personality and job level. *Scandinavian Journal of Psychology*, *57*(6), 535–541.

Goyal, N., & Miller, J. G. (2022). Beliefs in inevitable justice curb revenge behaviours: Cultural perspectives on karma. *European Journal of Social Psychology*. https://doi.org/10.1002/ejsp.2933

Graham, W., & Balloun, J. (1973). An empirical test of Maslow's need hierarchy theory. *Journal of Humanistic Psychology, 13,* 97–108.

Gram, P., Dunn, B., & Ellis, D. (2005). Relationship between EEG and psychological type. *Journal of Psychological Type, 65,* 33–46.

Grandchampa, V. A. T., Gordeevaa, T. O., & Sychevc, O. A. (2021). Optimistic attributional style as a predictor of well-being: Exploring the mediating roles of gratitude and savoring the moment. *Psychology in Russia. State of the Art*, *14*(3).

Granello, D. (2010). Cognitive complexity among practicing counselors: How thinking changes with experience. *Journal of Counseling and Development, 88*(1), 92–100.

Graziano, P. A., & Hart, K. (2016). Beyond behavior modification: Benefits of social–emotional/self-regulation training for preschoolers with behavior problems. *Journal of School Psychology*, *58*, 91–111.

Graziano, W. G., Jensen-Campbell, L. A., & Sullivan-Logan, G. M. (1998). Temperament, activity, and expectations for later personality development. *Journal of Personality and Social Psychology, 74,* 1266–1277.

Greco, A., Steca, P., Monzani, D., Malfatto, G., & Parati, G. (2015). The influence of illness severity on health satisfaction in patients with cardiovascular disease: The mediating role of illness perception and self-efficacy beliefs. *Behavioral Medicine, 41,* 9–17.

Green, B., & Griffiths, E. (2014). Birth order and post-traumatic stress disorder. *Psychology, Health and Medicine, 19,* 24–32.

Greever, K., Tseng, M., & Friedland, B. (1973). Development of the Social Interest Index. *Journal of Consulting and Clinical Psychology, 41,* 454–458.

Grey, L. (1998). *Alfred Adler, the forgotten prophet: A vision for the 21st century*. Praeger.

Grice, J. (2002). Idiogrid: Software for the management and analysis of repertory grids. *Behavior Research Methods, Instruments, and Computers, 34,* 338–341.

Grice, J., Burkley, E., Burkley, M., Wright, S., & Slaby, J. (2004). A sentence completion task for eliciting personal constructs in specific domains. *Personal Construct Theory & Practice*, *1*(2), 60–75.

Grice, J. W. (2004). Bridging the idiographic-nomothetic divide in ratings of self and others on the Big Five. *Journal of Personality, 72*(2), 203–241.

Grieser, C., Greenberg, R., & Harrison, R. H. (1972). The adaptive function of sleep: The differential effects of sleep and dreaming on recall. *Journal of Abnormal Psychology, 80,* 280–286.

Griffith, A. L. (2014). Faculty gender in the college classroom: Does it matter for achievement and major choice? *Southern Economic Journal*, *81*(1), 211–231.

Grigsby, T. J., Forster, M., Meca, A., Zamboanga, B. L., Schwartz, S. J., & Unger, J. B. (2018). Cultural stressors, identity development, and substance use attitudes among Hispanic immigrant adolescents. *Journal of Community Psychology, 46*(1), 117–132. https://doi.org/10.1002/jcop.21920

Griskevicius, V., Ackerman, J. M., Cantú, S. M., Delton, A. W., Robertson, T. E., Simpson, J. A., Thompson, M. E., & Tybur, J. M. (2013). When the economy falters, do people spend or save? Responses to resource scarcity depend on childhood environments. *Psychological Science*, *24*(2), 197–205.

Griskevicius, V., Tybur, J. M., Delton, A. W., & Robertson, T. E. (2011). The influence of mortality and socioeconomic status on risk and delayed rewards: A life history theory approach. *Journal of Personality and Social Psychology, 100*(6), 1015.

Groeger, N. (2012). Meta needs in the context of schema therapy: Psychometric qualities of a new Meta Needs Questionnaire and relationships with depression, anxiety and schemas. *Maastricht Student Journal of Psychology and Neuroscience*, *1*.

Groenendijk, T., Janssen, T., Rijlaarsdam, G., & van den Bergh, H. (2013). The effect of observational learning on students' performance, processes, and motivation in two creative domains. *British Journal of Educational Psychology*, *83*(1), 3–28.

Gronerod, C., Overskeid, G., & Hartmann, E. (2013). Under Skinner's skin: Gauging a behaviorist from his Rorschach protocol. *Journal of Personality Assessment, 95,* 1–12.

Grotz, M., Hapke, U., Lampert, T., & Baumeister, H. (2011). Health locus of control and health behavior: Results from a nationally representative sample. *Psychology, Health & Medicine, 16,* 129–140.

Grover, S., & Helliwell, J. F. (2019). How's life at home? New evidence on marriage and the set point for happiness. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *20*(2), 373–390. https://doi.org/10.1007/s10902-017-9941-3

Gruber, J., & Mullainathan, S. (2006). Do cigarette taxes make smokers happier? In Y.-K. Ng & L. S. Ho (Eds.), *Happiness and public policy: Theory, case studies and implications* (pp. 109–146). Palgrave Macmillan. https://doi.org/10.1057/9780230288027_6

Grubrich-Simitis, I. (1998). "Nothing about the totem meal!" on Freud's notes. In M. S. Roth (Ed.), *Freud: Conflict and culture* (pp. 17–31). New York: Knopf.

Guan, B., Deng, Y., & Luo, X. (2010). Characteristics of behavior and self-concept in psychological abused/neglected juveniles with generalized anxiety disorder. *Chinese Journal of Clinical Psychology, 28,* 334–336.

Guan, Y., Chen, S. X., Levin, N., Bond, M. H., Luo, N., Xu, J., Zhou, X., Chen, P., Li, C., Fu, R., Zhang, J., Ji, Y., Mo, Z., Li, Y., Fang, Z., Jiang, D., & Han, X. (2015). Differences in career decision-making profiles between American and Chinese university students: The relative strength of mediating mechanisms across cultures. *Journal of Cross-Cultural Psychology*, *46*(6), 856–872.

Guardian (2019). *The joy that comes from embracing trans identity shouldn't be so rare. Guardian*. 25 January. Retrieved December 9, 2021, from https://www.theguardian.com/world/2019/jan/26/the-joy-that-comes-from-embracing-trans-identity-shouldnt-be-so-rare

Gudmundsson, E. (2009). Guidelines for translating and adapting psychological instruments. *Nordic Psychology, 61*(2), 29–45.

Guenther, C. L., Zhang, Y., & Sedikides, C. (2023). The authentic self is the self-enhancing self: A self-enhancement framework of authenticity. *Personality and Social Psychology Bulletin*, 014616722311606. https://doi.org/10.1177/0146167223116065

Gullberg, M., & Holmqvist, K. (2002). Visual attention towards gesture in face-to-face interaction vs. on screen. In I. Wachsmuth & T. Sowa (Eds.), *Gesture and sign language based human-computer interaction* (pp. 206–214). Springer Verlag.

Gundersen, K., Brown, M., Bhathal, P., & Kennedy, S. (2011). *Birth order perceptions: Personality differences between believers and nonbelievers*. American Psychological Association Convention Presentation. http://psycnet.apa.org/psycex-tra/702992011–001.pdf

Gungor, D., Bornstein, M., De Leersnyder, J., Cote, L., Ceulemans, E., & Mesquita, B. (2013). Acculturation of personality: A three-culture study of Japanese, Japanese Americans, and European Americans. *Journal of Cross-Cultural Psychology, 44,* 701–718.

Gunsung, L. (2013). *Relations between ego-resiliency, interpersonal competence, subjective well-being, and depression.* American Psychological Association Convention Presentation. Honolulu, Hawaii.

Guo-Xing, S., & Hai, Y. (2006). Subjective well-being of middle-school children. *Chinese Mental Health Journal, 20,* 238–241.

Gupta, N., Ganster, D. C., & Kepes, S. (2013). Assessing the validity of sales self-efficacy: A cautionary tale. *Journal of Applied Psychology, 98*(4), 690.

Gupta, R., Derevensky, J., & Ellenbogen, S. (2006). Personality characteristics and risk-taking tendencies among adolescent gamblers. *Canadian Journal of Behavioral Science, 38,* 201–213.

Gurven, M., von Rueden, C., Massenkoff, M., Kaplan, H., & Lero Vie, M. (2013). How universal is the Big Five? Testing the five factor model of personality variation among forager-farmers in the Bolivian Amazon. *Journal of Personality and Social Psychology, 104,* 354–370.

Gwandure, C., & Mayekiso, T. (2010). Predicting HIV risk using a locus of control-based model among university students. *Journal of Child and Adolescent Mental Health, 22,* 119–129.

Hafner, J. L., Fakouri, M. E., & Labrentz, H. L. (1982). First memories of "normal" and alcoholic individuals. *Individual Psychology, 38,* 238–244.

Hagedoorn, M., & Molleman, E. (2006). Facial disfigurement in patients with head and neck cancer: The role of social self-efficacy. *Health Psychology, 25,* 643–647.

Hagemann, D., & Naumann, E. (2009). States versus traits: An integrated model for the test of Eysenck's arousal/arousability hypotheses. *Journal of Individual Differences, 30*(2), 87–98.

Haghayegh, S., & Oreyzia, H. (2009). Relation of aggression types according to Karen Horney's theory with negative and positive driving behaviors and accidents. *Iranian Journal of Psychiatry and Clinical Psychology, 15*(1), 81–85.

Hahn, E., Gottschling, J., & Spinath, F. M. (2012). Short measurements of personality—validity and reliability of the GSOEP Big Five Inventory (BFI-S). *Journal of Research in Personality*, *46*(3), 355–359.

Hall, C., & Van de Castle, R. (1965). An empirical investigation of the castration complex in dreams. *Journal of Personality, 33,* 20–29.

Hall, E. (1983, June). A conversation with Erik Erikson. *Psychology Today,* pp. 22–30.

Hall, M. H. (1968, July). A conversation with Abraham H. Maslow. *Psychology Today,* pp. 35–37, 54–57.

Hall, W. J., Chapman, M. V., Lee, K. M., Merino, Y. M., Thomas, T. W., Payne, B. K., Eng, E., Day, S. H., & Coyne-Beasley, T. (2015). Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: A systematic review. *American Journal of Public Health*, *105*(12), e60–e76.

Hamerman, E. J., & Morewedge, C. K. (2015). Reliance on luck: Identifying which achievement goals elicit superstitious behavior. *Personality and Social Psychology Bulletin, 41*(3), 323–335.

Hallman, J. M., Yarhouse, M. A., & Suárez, E. C. (2018). Shame and psychosocial development in religiously affiliated sexual minority women. *Journal of Psychology and Theology*, *46*(1), 3–21.

Hamermesh, D., & Abrevaya, J. (2011). Beauty is the promise of happiness? Discussion Paper No. 5600. The Institute for the Study of Labor.

Hampson, S., Andrews, J., Barckley, M., Lichtenstein, E., & Lee, M. (2000). Conscientiousness, perceived risk, and risk-reduction behaviors: A preliminary study. *Health Psychology, 19,* 496–500.

Hampson, S., Tildesley, E., Andrews, J., Barckley, M., & Peterson, M. (2013). Smoking trajectories across high school: Sensation seeking and hookah use. *Nicotine & Tobacco Research, 15,* 1400–1408.

Hampson, S. E., Edmonds, G. W., Barckley, M., Goldberg, L. R., Dubanoski, J. P., & Hillier, T. A. (2016). A Big Five approach to self-regulation: Personality traits and health trajectories in the Hawaii longitudinal study of personality and health. *Psychology, Health & Medicine*, *21*(2), 152–162.

Hampson, S. E., & Goldberg, L. R. (2006). A first large cohort study of personality trait stability over the 40 years between elementary school and midlife. *Journal of Personality and Social Psychology, 91*(4), 763–779.

Hampton, R. S., & Varnum, M. E. (2018). Do cultures vary in self-enhancement? ERP, behavioral, and self-report evidence. *Social Neuroscience, 13*(5), 566–578.

Handel, R. W., & Ben-Porath, Y. S. (2000). Multicultural assessment with the MMPI-2: Issues for research and practice. In R. H. Dana (Ed.), *Handbook of cross-cultural and multicultural personality assessment* (pp. 229–245). Erlbaum.

Hanewitz, W. B. (1978). Police personality: A Jungian perspective. *Crime and Delinquency, 24,* 152–172.

Hankoff, L. D. (1987). The earliest memories of criminals. *International Journal of Offender Therapy and Comparative Criminology, 31,* 195–201.

Hansel, A., & von Kanel, R. (2013). Unconscious fearful priming followed by a psychosocial stress test results in higher cortisol levels. *Stress & Health: Journal of the International Society for the Investigation of Stress, 29,* 317–323.

Hansen, E., & Breivik, G. (2001). Sensation-seeking as a predictor of positive and negative risk behavior among adolescents. *Personality and Individual Differences, 30,* 627–640.

Hansen, J., Alves, H., & Trope, Y. (2016). Psychological distance reduces literal imitation: Evidence from an imitation-learning paradigm. *Journal of Experimental Psychology: Human Perception and Performance, 42*(3), 320–330. https://doi.org/10.1037/xhp0000150

Hansen, J., & Genschow, O. (2020). Psychological distance and imitation. *Social and Personality Psychology Compass*, *14*(11), e12564.

Harden, K. P., Quinn, P. D., & Tucker-Drob, E. M. (2012). Genetically influenced change in sensation seeking drives the rise of delinquent behavior during adolescence. *Developmental Science*, *15*(1), 150–163.

Hardman, C. A., Jones, A., Burton, S., Duckworth, J. J., McGale, L. S., Mead, B. R., Roberts, C. A., Field, M, & Werthmann, J. (2021). Food-related attentional bias and its associations with appetitive motivation and body weight: A systematic review and meta-analysis. *Appetite*, *157*, 104986.

Harker, L., & Keltner, D. (2001). Expressions of positive emotion in women's college yearbook pictures and their relationship to personality and life outcomes across adulthood. *Journal of Personality and Social Psychology, 80,* 112–124.

Harless, A. M., & Stoltz, K. B. (2018). Integrating narrative approaches with early recollections to provide career counseling with low-SES secondary students. *The Journal of Individual Psychology, 74*(1), 117–133. https://doi.org/10.1353/jip.2018.0007

Harmon-Jones, C., Schmeichel, B. J., Inzlicht, M., & Harmon-Jones, E. (2011). Trait approach motivation relates to dissonance reduction. *Social Psychological and Personality Science*, *2*(1), 21–28.

Harrington, J. A., Fink, B. C., & Dougher, M. J. (2001). Into the lion's den: Incorporating personality and evolutionary psychology to expand clinical behavior analysis. *International Journal of Psychology and Psychological Therapy, 1*(2), 175–189.

Harrington, R., & Loffredo, D. A. (2001). The relationship between life satisfaction, self-consciousness, and the Myers-Briggs Type Inventory dimensions. *Journal of Psychology, 135,* 439–450.

Harris, B. (2011). Review of playing with fire: The controversial career of Hans J. Eysenck. *History of Psychiatry, 22,* 500–501.

Harris, D., & Kuba, I. (1997). Ethnocultural identity and eating disorders in women of color. *Professional Psychology, 28,* 341–347.

Harris, E., & Bardey, A. C. (2019). Do Instagram profiles accurately portray personality? An investigation into idealized online self-presentation. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.00871

Harris, E. G., & Mowen, J. C. (2001). The influence of cardinal-, central-, and surface-level personality traits on consumers' bargaining and complaint intentions. *Psychology & Marketing*, *18*(11), 1155–1185.

Harris, K., English, T., Harms, P. D., Gross, J. J., & Jackson, J. J. (2017). Why are extraverts more satisfied? Personality, social experiences, and subjective well–being in college. *European Journal of Personality*, *31*(2), 170–186.

Harris, K., & Vazire, S. (2016). On friendship development and the Big Five personality traits. *Social and Personality Psychology Compass*, *10*(11), 647–667.

Harrison, K. (2009). The symbologist. Book review of "The Red Book: Liber Novus." *New York Times*. https://www.nytimes.com/2009/12/06/books/review/Harrison-t.html

Hart, D., Atkins, R., & Matsuba, M. (2008). The association of neighborhood poverty with personality change in childhood. *Journal of Personality and Social Psychology, 94*(6), 1048–1061.

Hartshorne, J. (2010, January 11). How birth order affects your personality. *Scientific American*. http://www.scientificamerican.com/article/ruled-by-birth-order/

Hartshorne, J., Salem-Hartshorne, N., & Hartshorne, T. (2009). Birth order effects in the formation of long-term relationships. *Journal of Individual Psychology, 65,* 156–176.

Harvey, E. (1999). Short-term and long-term effects of early parental employment on children of the National Longitudinal Survey of Youth. *Developmental Psychology*, *35*(2), 445.

Haslam, N. (2011). The return of the anal character. *Review of General Psychology, 15,* 351–360.

Hatami, F. (2016). Relationship between sport imagery ability and observational learning functions among male athletes. *Sport Psychology Studies* (*Mutaleat ravanshenasi varzeshi*), *5*(15), 103–116.

Hatano, K., Hihara, S., Sugimura, K., & Mizokami, S. (2022). Identity formation with gender differences in university students: A three-wave longitudinal study. *Current Psychology*, 1–13.

Hawkins, R. P., Peterson, R. F., Schweid, E., & Bijou, S. W. (1966). Behavior therapy in the home: Amelioration of problem parent-child relations with the parent in a therapeutic role. *Journal of Experimental Child Psychology, 4,* 99–107.

Hayes, H., & Joseph, S. (2003). Big Five correlates of three measures of subjective well-being. *Personality and Individual Differences, 34,* 723–727.

Hazler, R. (2011). Person-centered theory. In D. Capuzzi & R. Douglas (Eds.), *Counseling and psychotherapy* (5th ed., pp. 143–166). American Counseling Association.

Headey, B., Muffels, R., & Wagner, G. (2010). Long-running German panel survey shows that personal and economic choices, not just genes, matter for happiness. *Proceedings of the National Academy of Sciences, 107*(42), 17922–17926.

Heckhausen, J., & Schulz, R. (1995). A life-span theory of control. *Psychological Review, 102,* 284–304.

Hefner, D., Knop, K., Schmitt, S., & Vorderer, P. (2019). Rules? Role model? Relationship? The impact of parents on their children's problematic mobile phone involvement. *Media Psychology*, *22*(1), 82–108.

Heine, S., & Buchtel, E. (2009). Personality: The universal and the culturally specific. *Annual Review of Psychology, 60*, 369–394.

Heine, S., Lehman, D., Markus, H., & Kitayama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review, 106,* 766–794.

Heine, S., & Renshaw, K. (2002). Inter-judge agreement, self-enhancement, and liking: Cross-cultural divergences. *Personality and Social Psychology Bulletin, 28,* 578–587.

Heine, S., Takata, T., & Lehman, D. R. (2000). Beyond self-presentation: Evidence for self-criticisms among Japanese. *Personality and Social Psychology Bulletin, 26,* 71–78.

Heintzelman, S. J., & King, L. A. (2016). Meaning in life and intuition. *Journal of Personality and Social Psychology*, *110*(3), 477.

Hejazi, E., & Hasany, H. (2014). Identity styles, ethnic identity, and academic self-efficacy in Kurd students. *Journal of Psychology, 18,* 161–175.

Heller, D., Watson, D., & Ilies, R. (2004). The role of person versus situation in life satisfaction: A critical examination. *Psychological Bulletin, 130*(4), 574.

Heller, M., & Haynal, V. (1997). Depression and suicide faces. In P. Ekman & E. L. Rosenberg (Eds.), *What the face reveals* (pp. 398–407). Oxford University Press.

Helson, R. (1992). Women's difficult times and the rewriting of the life story. *Psychology of Women Quarterly, 16,* 331–347.

Helson, R., & Srivastava, S. (2001). Three paths of adult development: Conservers, seekers, and achievers. *Journal of Personality and Social Psychology, 80,* 995–1010.

Helson, R., Stewart, A., & Ostrove, J. (1995). Identity in three cohorts of midlife women. *Journal of Personality and Social Psychology, 69,* 544–557.

Henderson-King, D., & Smith, M. N. (2006). Meanings of education for university students: Academic motivation and personal values as predictors. *Social Psychology of Education*, *9*, 195–221.

Hennecke, M., & Bürgler, S. (2020). Many roads lead to Rome: Self-regulatory strategies and their effects on self-control. *Social and Personality Psychology Compass*, *14*(6), e12530.

Henríquez, D., Urzúa, A., & López-López, W. (2021). Indicators of identity and psychological well-being in immigrant population. *Frontiers in Psychology*, *12*, 707101.

Herdiansyah, M., & Sumampouw, N. J. (2017, September). Systematic desensitization for treating specific phobia of earthworms: An in vivo exposure study. In *1st International Conference on Intervention and Applied Psychology (ICIAP 2017)* (pp. 381–390). Atlantis Press.

Herrera, N., Zajonc, R., Wieczorkowska, G., & Cichomski, B. (2003). Beliefs about birth rank and their reflection in reality. *Journal of Personality and Social Psychology, 85,* 142–150.

Herrero, Ó., & Colom, R. (2008). Distinguishing impulsive, unsocialized sensation seeking: A comparison between criminal offenders and the general population. *Journal of Individual Differences*, *29*(4), 199–204.

Herrmann, S. D., Adelman, R. M., Bodford, J. E., Graudejus, O., Okun, M. A., & Kwan, V. S. (2016). The effects of a female role model on academic performance and persistence of women in STEM courses. *Basic and Applied Social Psychology*, *38*(5), 258–268.

Hess, A., & Hess, K. (2010). *Karen Horney: An appreciation of the development of a trans-systemic theorist*. American Psychological Association Convention Presentation. San Diego, California.

Hibbard, D., & Buhrmester, D. (2010). Competitiveness, gender, and adjustment among adolescents. *Sex Roles, 63* (5–6), 412–424.

Hickman, G. (2009). Review of *Neglected Children and Their Families* (2nd ed.). *Social Work Education, 28,* 935–938.

Hiebler-Ragger, M., Fuchshuber, J., Dröscher, H., Vajda, C., Fink, A., & Unterrainer, H. F. (2018). Personality influences the relationship between primary emotions and religious/spiritual well-being. *Frontiers in Psychology*, *9*, 370.

Hilbrink, E. E., Sakkalou, E., Ellis-Davies, K., Fowler, N. C., & Gattis, M. (2013). Selective and faithful imitation at 12 and 15 months. *Developmental Science*, *16*(6), 828–840.

Hilgard, E. (1987). *Psychology in America: A historical survey.* San Diego: Harcourt Brace Jovanovich.

Hill, J., Pace, T., & Robbins, R. (2010). Decolonizing personality assessment and honoring indigenous voices: A critical examination of the MMPI-2. *Cultural Diversity and Ethnic Minority Psychology, 16,* 16–25.

Hill, K., Wittkowski, A., Hodgkinson, E., Bell, R., & Hare, D. J. (2016). Using the repertory grid technique to examine trainee clinical psychologists' construal of their personal and professional development. *Clinical Psychology & Psychotherapy, 23*(5), 425–437.

Hill, P. L., & Turiano, N. A. (2014). Purpose in life as a predictor of mortality across adulthood. *Psychological Science, 25*(7), 1482–1486.

Hill, T., Kusev, P., & Van Schaik, P. (2019). Choice under risk: How occupation influences preferences. *Frontiers in Psychology*, *10*, 2003. https://doi.org/10.3389/fpsyg.2019.02003

Hillen, M., de Haes, H., Stalpers, L., Klinkenbijl, J., Eddes, E., Verdam, M., & Smets, E. M. (2014). How attachment style and locus of control influence patients' trust in their oncologist. *Journal of Psychosomatic Research, 76,* 221–226.

Hines, D., Douglas, E., & Mahmood, S. (2010). The effects of survey administration on disclosure rates to sensitive items among men: A comparison of an Internet panel with a RDD telephone sample. *Computers in Human Behavior, 26,* 1327–1335.

Hintsanen, M., Puttonen, S., Tornroos, M., Jokela, M., Pukki-Raback, L., Hintsa, L., Merjonen, P., Dwyer, T., Raitakari, O. T., Venn, A., & Keltikangas-Järvinen. (2014). Five-factor personality traits and sleep: Evidence from two population-based cohort studies. *Health Psychology, 33,* 1214–1223.

Hiroto, D. S. (1974). Locus of control and learned helplessness. *Journal of Experimental Psychology, 102,* 187–193.

Hirsh, J., Walker, K., Wilkinson, R., & Lyness, J. (2014). Family criticism and depressive symptoms in older adult primary care patients: Optimism and pessimism as moderators. *American Journal of Geriatric Psychiatry, 22,* 632–635.

Hitokoto, H., & Uchida, Y. (2015). Interdependent happiness: Theoretical importance and measurement validity. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *16*(1), 211–239. https://doi.org/10.1007/s10902-014-9505-8

Hjertass, T. (2009). Rediscovering the construct of basic anxiety. *Journal of Individual Psychology, 65,* 47–56.

Ho, M., Chen, S., & Hoffman, E. (2012). Unpacking cultural variations in peak experiences: Cross-cultural comparisons of early childhood recollection between Hong Kong and Brazil. *Journal of Happiness Studies, 13,* 247–260.

Ho, M., Chen, S., Hoffman, E., Guan, Y., & Iversen, V. (2013). Cross-cultural comparisons of adults' childhood recollections: How are peak experiences described in China and Portugal? *Journal of Happiness Studies, 14,* 185–197.

Hobfoll, S. E., Rom, T., & Segal, B. (1989). Sensation seeking, anxiety, and risk taking in the Israeli context. In S. Einstein (Ed.), *Drug and Alcohol Use: Issues and Factors* (pp. 53–59). Plenum Press.

Hofer, C., Eisenberg, N., & Reiser, M. (2010). The role of socialization, effortful control, and ego resiliency in French adolescents' social functioning. *Journal of Research on Adolescence, 30*(3), 555–582.

Hofer, J., Busch, H., Au, A., Poláčková Šolcová, I., Tavel, P., & Tsien Wong, T. (2016). Generativity does not necessarily satisfy all your needs: Associations among cultural demand for generativity, generative concern, generative action, and need satisfaction in the elderly in four cultures. *Developmental Psychology*, *52*(3), 509.

Hoffmann, A. O., & Plotkina, D. (2021). Positive framing when assessing the personal resources to manage one's finances increases consumers' retirement self-efficacy and improves retirement goal clarity. *Psychology & Marketing*, *38*(12), 2286–2304.

Hoffman, E. (1988). *The right to be human: A biography of Abraham Maslow*. Tarcher.

Hoffman, E. (1994). *The drive for self: Alfred Adler and the founding of individual psychology*. Addison-Wesley.

Hoffman, E. (Ed.). (1996). *Future visions: The unpublished papers of Abraham Maslow*. Sage.

Hoffman, E., Kaneshiro, S., & Compton, W. (2012). Peak experiences among Americans in midlife. *Journal of Humanistic Psychology, 52,* 479–503.

Hoffman, E., & Ortiz, F. A. (2010). Experiencias cumbre en jovenes Mexicanos [Peak experiences in Mexican youth]. *Revista Alternativas en Psicologia*, *22*, 10–20.

Hoffnung, M. (2004). Wanting it all: Career, marriage, and motherhood during college-educated women's 20s. *Sex Roles, 50*, 711–723.

Hofmann, W., Luhmann, M., Fisher, R., Vohs, K., & Baumeister, R. (2014). Yes, but are they happy? Effects of trait self-control on affective well-being and life satisfaction. *Journal of Personality, 4,* 265–277.

Hogan, R. (1995). *Hogan Assessment Systems*. Tulsa, OK.

Holder, M., & Klassen, A. (2010). Temperament and happiness in children. *Journal of Happiness Studies, 11,* 419–439.

Holland, C., Geraghty, J., & Shah, K. (2010). Differential moderating effect of locus of control on effect of driving experience in young male and female drivers. *Personality and Individual Differences, 48,* 821–826.

Hollis, L. P. (2019). Lessons from Bandura's Bobo Doll experiments: Leadership's deliberate indifference exacerbates workplace bullying in higher education. *Journal for the Study of Postsecondary and Tertiary Education*, *4*, 85–102.

Holmgren, S., Molander, B., & Nilsson, K. (2006). Intelligence and executive functioning in adult age: Effects of sibship size and birth order. *European Journal of Cognitive Psychology, 18,* 138–158.

Holtgraves, T. (2004). Social desirability and self-reports: Testing models of socially desirable responding. *Personality and Social Psychology Bulletin, 30,* 161–172.

Holtz, P., & Appel, M. (2011). Internet use and video gaming predict behavior in early adolescence. *Journal of Adolescence, 34,* 49–58.

Holzberger, D., Philipp, A., & Kunter, M. (2013). How teachers' self-efficacy is related to instructional quality: A longitudinal analysis. *Journal of Educational Psychology, 105,* 774–786.

Holzman, P. S. (1994). Hilgard on psychoanalysis as a science. *Psychological Science, 5,* 190–191.

Homan, K. J., Greenberg, J. S., & Mailick, M. R. (2020). Generativity and well-being of midlife and aging parents with children with developmental or mental health problems. *Research on Aging*, *42*(3–4), 95–104.

Ho, S. S., Lwin, M. O., & Lee, E. W. (2017). Till logout do us part? Comparison of factors predicting excessive social network sites use and addiction between Singaporean adolescents and adults. *Computers in Human Behavior*, *75*, 632–642. https://doi.org/10.1016/j.chb.2017.06.002

Hong, N., & del Busto, C. T. (2020). Collaboration, scaffolding, and successive approximations: A developmental science approach to training in clinical psychology. *Training and Education in Professional Psychology*, *14*(3), 228.

Hope, S. (2019). *Person-centred counselling for trans and gender diverse people: A practical guide*. Jessica Kingsley Publishers.

Hopkins, Z. L., & Branigan, H. P. (2020). Children show selectively increased language imitation after experiencing ostracism. *Developmental Psychology, 56*(5), 897–911. https://doi.org/10.1037/dev0000915

Hoppmann, C., Gerstorf, D., Willis, S., & Schaie, K. (2011). Spousal interrelations in happiness in the Seattle Longitudinal Study: Considerable similarities in levels and change over time. *Developmental Psychology, 47,* 1–8.

Horikawa, T., Tamaki, M., Miyawaki, Y., & Kamitani, Y. (2013). Neural decoding of visual imagery during sleep. *Science, 340,* 639–642.

Horley, J. (2006). Personal construct psychotherapy: Fixed-role therapy with forensic clients. *Journal of Sexual Aggression*, *12*(01), 53–61.

Horn, J. (2001). Obituary: Raymond Bernard Cattell, 1905–1998. *American Psychologist, 56*, 71–72.

Horney, K. (1926). The flight from womanhood. *International Journal of Psychoanalysis, 7*.

Horney, K. (1937). *The neurotic personality of our time.* Norton.

Horney, K. (1939). *New ways in psychoanalysis.* Norton.

Horney, K. (1942). *Self-analysis.* Norton.

Horney, K. (1945). *Our inner conflicts*. Norton.

Horney, K. (1967). The flight from womanhood: The masculinity-complex in women as viewed by men and by women. In H. Kelman (Ed.), *Feminine psychology.* Norton.

Horney, K. (1980). *The adolescent diaries of Karen Horney*. Basic Books. [Diaries written 1899–1911].

Horney, K. (1987). *Final lectures*. D. H. Ingram (Ed.). Norton. [Lectures delivered 1952].

Horwitz, N. M. (2001). Why do people stay in hateful relationships? The concept of malignant vindictiveness. *The American Journal of Psychoanalysis*, *60*(2), 143–160. https://doi.org/10.1023/A:1010294001615

Hossner, E. J., Schiebl, F., & Göhner, U. (2015). A functional approach to movement analysis and error identification in sports and physical education. *Frontiers in Psychology*, *6*, 1339.

Howard, S., Sultana, S., & Snell, C. L. (2020). Social isolation among young black women: Implications for social work. *Social Work Education*, *39*(7), 957–970.

Howe, N., Persram, R. J., & Bergeron, C. (2019). Imitation as a learning strategy during sibling teaching. *Journal of Cognition and Development*, *20*(4), 466–486.

Howell, L., & Beth, A. (2004). Pioneers in our own lives: Grounded theory of lesbians' midlife development. *Journal of Women and Aging, 16,* 133–147.

Howell, R., & Howell, C. (2008). The relation of economic status to subjective well-being in developing countries: A metaanalysis. *Psychological Bulletin, 134*(4)*,* 536–560.

Hsu, L., & Alden, L. (2008). Cultural influences on willingness to seek treatment for social anxiety in Chinese-and European-heritage students. *Cultural Diversity and Ethnic Minority Psychology, 14*(3)*,* 215–223.

Hu, J., Zhen, S., Yu, C., Zhang, Q., & Zhang, W. (2017). Sensation seeking and online gaming addiction in adolescents: A moderated mediation model of positive affective associations and impulsivity. *Frontiers in Psychology*, *8*, 699.

Huang, C. (2010a). Internet use and psychological well-being: A meta-analysis. *Cyberpsychology, Behavior, and Social Networking, 13*(3)*,* 241–249.

Huang, C. (2010b). Mean-level change in self-esteem from childhood through adulthood: Meta-analysis of longitudinal studies. *Review of General Psychology, 14*(3), 251–260.

Huang, C., & Park, D. (2013). Cultural influences on Facebook photographs. *International Journal of Psychology, 48,* 334–343.

Huang, J. (2017). The relationship between employee psychological empowerment and proactive behavior: Self-efficacy as mediator. *Social Behavior and Personality: An International Journal*, *45*(7), 1157–1166.

Huang, J., & Yang, Y. (2010). The relationship between personality traits and online shopping motivations. *Social Behavior and Personality, 38,* 673–680.

Huang, W., & Liu, S. (2020). The observational learning effect on skill acquisition in football. *Revista de Psicología del Deporte (Journal of Sport Psychology)*, *29*(4), 33–43.

Huelsnitz, C. O., Neel, R., & Human, L. J. (2020). Accuracy in perceptions of fundamental social motives: Comparisons to perceptions of Big Five traits and associations with friendship quality. *Personality and Social Psychology Bulletin*, *46*(1), 3–19.

Huesmann, L. (2010). Nailing the coffin shut on doubts that violent video games stimulate aggression: Comment on Anderson et al. (2010). *Psychological Bulletin, 136,* 179–181.

Huesmann, L., Moise-Titus, J., Podolski, C., & Eron, L. (2003). Longitudinal relations between children's exposure to TV violence and their aggressive and violent behavior in young adulthood: 1977–1992. *Developmental Psychology, 39,* 201–221.

Hughes, D. L., Del Toro, J., & Way, N. (2017). Interrelations among dimensions of ethnic-racial identity during adolescence. *Developmental Psychology*, *53*(11), 2139.

Huifang, Y., & Shuming, Z. (2004, July). A research on the personality types of business managers. *Psychological Science (China),* 983–985.

Human, L. J., Mignault, M.-C., Biesanz, J. C., & Rogers, K. H. (2019). Why are well-adjusted people seen more accurately? the role of personality-behavior congruence in naturalistic social settings. *Journal of Personality and Social Psychology*, *117*(2), 465–482. https://doi.org/10.1037/pspp0000193

Hunt, C., Keogh, E., & French, C. (2006). Anxiety sensitivity: The role of conscious awareness and selective attentional bias to physical threat. *Emotion, 6,* 418–428.

Huo, D., & Johnson-Migalski, L. (2021). Social interest and collectivism: A study of the New Generation of Mainland China. *The Journal of Individual Psychology, 77(*3), 322–334. https://doi.org/10.1353/jip.2021.0023

Hur, Y. (2009). Genetic and environmental contributions to childhood temperament in South Korean twins. *Twin Research and Human Genetics, 12,* 549–551.

Hurst, J. E., & Kavanagh, P. S. (2017). Life history strategies and psychopathology: The faster the life strategies, the more symptoms of psychopathology. *Evolution and Human Behavior, 38*(1), 1–8.

Hussain, M. (2014). The robustness of high Danish national happiness: A temporal cross-country analysis of population subgroups. *Social Indicators Research, 118,* 759–774.

Hutcheson, C., Fleming, M., & Martin, C. (2014). An examination and appreciation of locus of control in psychosis: Issues and relationships between constructs and measurement. *Journal of Psychiatric and Mental Health Nursing, 21,* 906–916.

Hutson, M. (2010). Sleep: Sweet dreams. *Psychology Today, 43*(1), 29.

Huttunen-Lenz, M., Hansen, S., Christensen, P., Meinert Larsen, T., Sandø-Pedersen, F., Drummen, M., Adam, T. C., Macdonald, I. A., Taylor, M. A., Martinez, J. A., Navas-Carretero, S., Handjiev, S., Poppitt, S. D., Silvestre, M. P., Fogelholm, M., Pietiläinen, K. H., Brand-Miller, J., Berendsen, A. A., Raben, A., & Schlicht, W. (2018). PREVIEW study—influence of a behavior modification intervention (PREMIT) in over 2300 people with pre-diabetes: Intention, self-efficacy and outcome expectancies during the early phase of a lifestyle intervention. *Psychology Research and Behavior Management*, 383–394.

Hwang, W. (2006). The psychotherapy adaptation and modification framework: Application to Asian Americans. *American Psychologist, 61,* 702–715.

Iacovino, J., Jackson, J., & Oltmanns, T. (2014). The relative impact of socioeconomic status and childhood trauma on Black-White differences in paranoid personality disorder syndrome. *Journal of Abnormal Psychology, 123,* 225–230.

Ickes, W., Park, A., & Johnson, A. (2012). Linking identity status to strength of sense of self: Theory and validation. *Self and Identity, 11,* 531–544.

Ifcher, J., & Zarghamee, H. (2014). The happiness of single mothers: Evidence from the General Social Survey. *Journal of Happiness Studies, 15,* 1219–1238.

Ijaz, T., Malik, F., & Ijaz, S. (2019). Perceptions of socially disadvantaged children: A personal construct approach. *Journal of Constructivist Psychology, 32*(4), 370–389. https://doi.org/10.1080/10720537.2018.1515045

Ináncsi, T., Láng, A., & Bereczkei, T. (2016). A darker shade of love: Machiavellianism and positive assortative mating based on romantic ideals. *Europe's Journal of Psychology*, *12*(1), 137.

Inzlicht, M., & Legault, L. (2014). No pain, no gain: How distress underlies effective self-control (and unites diverse social psychological phenomena). In J. P. Forgas & E. Harmon-Jones (Eds.), *Motivation and its regulation: The control within.* (pp. 115–132). Psychology Press.

Isaacowitz, D. (2005a). Correlates of well-being in adulthood and old age: A tale of two optimisms. *Journal of Research in Personality, 39,* 224–244.

Isaacowitz, D. (2005b). The gaze of the optimist. *Personality and Social Psychology Bulletin, 31,* 407–415.

Iskender, M., & Akin, A. (2010). Social self-efficacy, academic locus of control, and Internet addiction. *Computers and Education, 54,* 1101–1106.

Ispa, J. M., Su-Russell, C., Palermo, F., & Carlo, G. (2017). The interplay of maternal sensitivity and toddler engagement of mother in predicting self-regulation. *Developmental Psychology*, *53*(3), 425.

Ispas, D., Iliescu, D., Ilie, A., & Johnson, R. (2014). Exploring the cross-cultural generalizability of the five-factor model of personality: The Romanian Neo PI-R. *Journal of Cross-Cultural Psychology, 45,* 1074–1088.

Israelashvili, M., Kim, T., & Bukobza, G. (2012). Adolescents' over-use of the cyber world: Internet addiction or identity exploration? *Journal of Adolescence, 35,* 417–424.

Ivtzan, I., Gardner, H. E., Bernard, I., Sekhon, M., & Hart, R. (2013). Wellbeing through self-fulfilment: Examining developmental aspects of self-actualization. *The Humanistic Psychologist, 41*(2), 119–132.

Ivtzan, I., & Moon, H. S. (2008). The beauty of self-actualisation: Linking physical attractiveness and self-fulfilment. *Europe's Journal of Psychology*, *4*(4), 34–46.

Iwasaki, Y., Messina, E. S., & Hopper, T. (2018). The role of leisure in meaning-making and engagement with life. *The Journal of Positive Psychology*, *13*(1), 29–35. https://doi.org/10.1080/17439760.2017.1374443

Iwon, K., Skibinska, J., Jasielska, D., & Kalwarczyk, S. (2021). Elevating subjective well-being through physical exercises: An intervention study. *Frontiers in Psychology*, *12*, 702678.

Iyer, P., Dougall, A., & Jensen-Campbell, L. (2013). Are some adolescents differentially susceptible to the influence of bullying on depression? *Journal of Research on Personality, 47,* 272–281.

Jack, R., Caldara, R., & Schyns, P. (2012). Internal representations reveal cultural diversity in expectations of facial expressions of emotion. *Journal of Experimental Psychology: General, 13,* 19–25.

Jackson, M., & Sechrest, L. (1962). Early recollections in four neurotic diagnostic categories. *Journal of Individual Psychology, 18,* 52–56.

Jackson, T., Wang, Y., Wang, Y., & Fan, H. (2014). Self-efficacy and chronic pain outcomes: A meta-analytic review. *Journal of Pain, 15,* 800–814.

Jacobson, J. L., & Wille, D. E. (1986). The influence of attachment patterns on developmental changes in peer

interaction from the toddler to the preschool period. *Child Development, 57,* 338–347.

Jaffé, A. (1971). *The myth of meaning: Jung and the expansion of consciousness.* Putnam.

James, S., Kavanagh, P., Jonason, P., Chonody, J., & Scrutton, H. (2014). The Dark Triad, schadenfreude and sensational interests: Dark personalities, dark emotions, and dark behaviors. *Personality and Individual Differences, 68,* 211–216.

Janarthanam, D., & Gnanadevan, R. (2014). Gender differences in ego-identity status in higher secondary students. *International Journal of Teacher Educational Research, 3,* 2319–4642.

Jankowska, A. M., Lewandowska-Walter, A., Chalupa, A. A., Jonak, J., Duszynski, R., & Mazurkiewicz, N. (2015, March). Understanding the relationships between attachment styles, locus of control, school maladaptation, and depression symptoms among students in foster care. In *School Psychology Forum* (Vol. 9, No. 1).

Jasinskaja-Lahti, I., Liebkind, K., Jaakkola, M., & Reuter, A. (2006). Perceived discrimination, social support networks, and psychological well-being among three immigrant groups. *Journal of Cross-Cultural Psychology, 37,* 293–311.

Jayawickreme, E., Holleran, S. E., Sutton, S., Furr, R. M., & Fleeson, W. (2023). Do people agree on how they and others are acting? Examining the degree of target–observer and observer–observer agreement about current behavior as it changes across situations. *Journal of Personality and Social Psychology*, *124*(1), 215–235. https://doi.org/10.1037/pspp0000445

Jayawickreme, E., Zachry, C. E., & Fleeson, W. (2019). Whole trait theory: An integrative approach to examining personality structure and process. *Personality and Individual Differences*, *136*, 2–11.

Jensen-Campbell, L., & Graziano, W. G. (2000). Beyond the school yard: Relationships as moderators of daily interpersonal conflict. *Personality and Social Psychology Bulletin, 26,* 923–935.

Jensen-Campbell, L., & Malcolm, K. (2007). The importance of conscientiousness in adolescent and interpersonal relationships. *Personality and Social Psychology Bulletin, 33,* 368–383.

Jerusalem, M., & Mittag, W. (1995). Self-efficacy in stressful life transitions. *Self-efficacy in Changing Societies*, 177–201.

Jeshmaridian, S. (2007). Commemorating the 100th birthday of Gordon Allport. *International Psychology Bulletin, 11*(3), 31–32.

Jiao, S., Ji, G., & Jing, Q. (1986). Comparative study of behavioral qualities of only children and sibling children. *Child Development, 57,* 357–361.

Jirout Košová, M., Kopecký, R., Oulovský, P., Nekvinda, M., & Flegr, J. (2021). My friend's true self: Children's concept of personal identity. *Philosophical Psychology*, *34*(1), 47–75. https://doi.org/10.1080/09515089.2020.1860209

John, O. P. (1990). The Big Five factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 66–100). Guilford Press.

John, O. P., Pals, J. L., & Westenberg, P. M. (1998). Personality prototypes and ego development: Conceptual similarities and relations in adult women. *Journal of Personality and Social Psychology, 74,* 1093–1108.

Johnson, M., Rowatt, W., & Petrini, L. (2011). A new trait on the market: Honesty-humility as a unique predictor of job performance ratings. *Personality and Individual Differences, 50,* 857–862.

Johnson, R. C. (1980). Summing up [Review of the book *Personality and learning theory: Vol. 1. The structure of personality in its environment*]. *Contemporary Psychology, 25,* 299–300.

Johnson-Migalski, L., Stone, M. H., Rounds, M., & Sesso-Osburn, F. (2019). Predictive relationship between trait and state anxiety and themes in early recollections using the early recollection rating scale–revised. *The Journal of Individual Psychology, 75*(1), 27–40. https://doi.org/10.1353/jip.2019.0002

Joiner, R. (1998). The effect of gender on children's software preferences. *Journal of Computer Assisted Learning, 14,* 195–198.

Joireman, J. (2004). Relationships between attributional complexity and empathy. *Individual Differences Research*, *2*(3).

Jokela, M. (2010). Characteristics of the first child predict the parents' probability of having another child. *Developmental Psychology, 46,* 915–926.

Jokela, M., Bleidorn, W., Lamb, M., Gosling, S., & Rentfrow, P. (2015). Geographically varying associations between personality and life satisfaction in the London metropolitan area. *PNAS Proceedings of the National Academy of Sciences of the United States of America, 112,* 725–730.

Jokela, M., Kivimaki, M., Elovainio, M., & Keltikangas-Jarvinen, L. (2009). Personality and having children: A two-way relationship. *Journal of Personality and Social Psychology, 96*(1), 218–230.

Jokela, M., Pulkki-Rabach, L., Elovainio, M., & Kivmaki, M. (2014). Personality traits as risk factors for stroke and coronary heart disease mortality: Pooled analysis of three cohort studies. *Journal of Behavioral Medicine, 37,* 881–889.

Jokinen, R. R., & Hartshorne, T. S. (2022). Anxiety disorders: A biopsychosocial model and an Adlerian approach for conceptualization and treatment. *The Journal of Individual Psychology, 78*(2), 155–174.

Jonason, P., & Webster, G. (2010). The dirty dozen: A concise measure of the dark triad. *Psychological Assessment, 22,* 420–432.

Jonason, P. K., Icho, A., & Ireland, K. (2016). Resources, harshness, and unpredictability: The socioeconomic conditions associated with the Dark Triad traits. *Evolutionary Psychology, 14*(1), 1474704915623699.

Jonason, P. K., Zeigler-Hill, V., & Baldacchino, J. (2017). Before and after: Personality pathology, childhood conditions, and life history outcomes. *Personality and Individual Differences, 116*, 38–43.

Jones, E. (1953, 1955, 1957). *The life and work of Sigmund Freud* (3 vols.). New York: Basic Books.

Jones, K. P., Clair, J. A., King, E. B., Humberd, B. K., & Arena, D. F. (2020). How help during pregnancy can undermine self-efficacy and increase postpartum intentions to quit. *Personnel Psychology*, *73*(3), 431–458.

Jones, R. L. (1994). An empirical study of Freud's penis-baby equation. *Journal of Nervous and Mental Disease, 182*(3), 127–135.

Jones, R. M., Dick, A., Coyl-Sheherd, D., & Ogletree, M. (2014). Antecedents in the male adolescent identity crisis: Age, grade, and physical development. *Youth and Society, 46,* 443–459.

Jonkmann, K., Thoemmes, F., Ludtke, O., & Trautwein, U. (2013). Personality traits and living arrangements in young adulthood: Selection and socialization. *Developmental Psychology, 50,* 683–698.

Jonsdottir, S., Arnarson, E., & Smari, J. (2008). Body esteem, perceived competence, and depression in Icelandic adolescents. *Nordic Psychology, 60*(11), 58–71.

Joo, Y., Joung, S., & Sim, W. (2011). Structural relationships among internal locus of control, institutional support, flow, and learner persistence in cyber universities. *Computer in Human Behavior, 27*(2), 714–722.

Joormann, J., & Gotlib, I. (2006). Is this happiness I see? Biases in the identification of emotional facial expressions in depression and social phobia. *Journal of Abnormal Psychology, 115,* 705–714.

Jorm, A. F. (1987). Sex differences in neuroticism: A quantitative synthesis of published research. *Australian and New Zealand Journal of Psychiatry, 21,* 501–506.

Joseph, S., & Linley, P. (2005). Positive adjustment to threatening events: An organismic valuing theory of growth through adversity. *Review of General Psychology, 9,* 262–280.

Joseph, S., & Murphy, D. (2012). Person-centered approach, positive psychology, and relational helping. *Journal of Humanistic Psychology*, *53*(1), 26–51. https://doi.org/10.1177/0022167812436426

Joseph, S., Murphy, D., & Regel, S. (2012). An affective–cognitive processing model of post-traumatic growth. *Clinical Psychology & Psychotherapy*, *19*(4), 316–325.

Joshanloo, M., Park, Y. O., & Park, S. H. (2017). Optimism as the moderator of the relationship between fragility of happiness beliefs and experienced happiness. *Personality and Individual Differences*, *106*, 61–63. https://doi.org/10.1016/j.paid.2016.10.039

Judge, T., Erez, A., Bono, J., & Thoresen, C. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology, 83,* 693–710.

Jules, M. A., Maynard, D. M., & Coulson, N. (2017). Emerging adults' susceptibility to sexting influences on Facebook: Dangerous or developmental. *International Psychology Bulletin*, *21*(3), 35–43.

Julian, A. M., Novitsky, C., Lee, K., & Ashton, M. C. (2022). Convergent validity of three brief six-factor measures of personality. *Personality and Individual Differences*, *188*, 111436. https://doi.org/10.1016/j.paid.2021.111436

Jung, C. G. (1927). The structure of the psyche. In *Collected works* (Vol. 8, pp. 139–158). Princeton University Press.

Jung, C. G. (1928). On psychic energy. In *Collected works* (Vol. 8, pp. 3–66). Princeton University Press.

Jung, C. G. (1930). The stages of life. In *Collected works* (Vol. 8, pp. 387–403). Princeton University Press.

Jung, C. G. (1953). *Two essays on analytical psychology*. Pantheon.

Jung, C. G. (1961). *Memories, dreams, reflections*. Vintage Books.

Jung, H., Seo, E., Han, E., Henderson, M. D., & Patall, E. A. (2020). Prosocial modeling: A meta-analytic review and synthesis. *Psychological Bulletin*, *146*(8), 635.

Jung, S., Sindermann, C., Yang, H., Elhai, J. D., & Montag, C. (2022). Anxiety-related coping styles and individual differences in primary emotional systems against the background of affective neuroscience theory: A study using samples from Germany and China. *Trends in Psychology*, 1–17.

Kaftan, O. J., Freund, A. M., Diener, E., Oishi, S., & Tay, L. (2018). The way is the goal: The role of goal focus for successful goal pursuit and subjective well-being. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of well-being*. DEF.

Kagan, J. (1999). *Three seductive ideas*. Cambridge, MA: Harvard University Press.

Kagan, J., Kearsley, R., & Zelazo, P. (1978). *Infancy.* Cambridge, MA: Harvard University Press.

Kahneman, D., Krueger, A., Schkade, D., Schwartz, N., & Stone, A. (2006). Would you be happier if you were richer? A focusing illusion. *Science, 312,* 1908–1910.

Kahr, B. (2010). Four unknown Freud anecdotes. *American Imago, 67*(2), 301–312.

Kajonius, P. J. (2021). Predicting future happiness on the basis of personality traits and values. *International Journal of Personality Psychology*, *7*, 43–47. https://doi.org/10.21827/ijpp.7.37717

Kajonius, P. J., & Carlander, A. (2017). Who gets ahead in life? Personality traits and childhood background in economic success. *Journal of Economic Psychology*, *59*, 164–170. https://doi-org.wake.idm.oclc.org/10.1016/j.joep.2017.03.004

Kajonius, P. J., & Johnson, J. (2018). Sex differences in 30 facets of the five factor model of personality in the large public (N= 320,128). *Personality and Individual Differences, 129*, 126–130.

Kalpidou, M., Costin, D., & Morris, J. (2011). The relationship between Facebook and the well-being of undergraduate college students. *Cyberpsychology, Behavior, and Social Networking, 14*(4), 183–189.

Kanagawa, C., Cross, S. E., & Markus, H. R. (2001). "Who am I?" The cultural psychology of the conceptual self. *Personality and Social Psychology Bulletin, 27,* 90–103.

Kanazawa, S., & Li, N. P. (2015). Happiness in modern society: Why intelligence and ethnic composition

matter. *Journal of Research in Personality*, *59*, 111–120. https://doi.org/10.1016/j.jrp.2015.06.004

Kandel, E. (2012). *The age of insight: The quest to understand the unconscious in art, mind, and brain, from Vienna 1900 to the present.* New York: Random House.

Kandler, C. (2012). Nature and nurture in personality development: The case of neuroticism and extraversion. *Current Directions in Psychological Science, 21,* 290–296.

Kandler, C., Bleidorn, W., & Riemann, R. (2012). Left or right? Sources of political orientation: The roles of genetic factors, cultural transmission, assortative mating, and personality. *Journal of Personality and Social Psychology, 102*(3), 633.

Kandler, C., Bleidorn, W., Riemann, R., Angleitner, A., & Spinath, F. M. (2011). The genetic links between the Big Five personality traits and general interest domains. *Personality and Social Psychology Bulletin, 37*(12), 1633–1643.

Kandler, C., Riemann, R., Angleitner, A., Spinath, F. M., Borkenau, P., & Penke, L. (2016). The nature of creativity: The roles of genetic factors, personality traits, cognitive abilities, and environmental sources. *Journal of Personality and Social Psychology*, *111*(2), 230–249. https://doi.org/10.1037/pspp0000087

Kandler, C., Zimmermann, J., & McAdams, D. P. (2014). Core and surface characteristics for the description and theory of personality differences and development. *European Journal of Personality*, *28*(3), 231–243.

Kanfer, R., Wolf, M. B., Kantrowitz, T. M., & Ackerman, P. L. (2010). Ability and trait complex predictors of academic and job performance: A person–situation approach. *Applied Psychology*, *59*(1), 40–69.

Kang, H., Chang, K., Chen, C., & Greenberger, E. (2015). Locus of control and peer relationships among Caucasian, Hispanic, Asian, and African American adolescents. *Journal of Youth and Adolescence, 44,* 184–194.

Kang, S., & Jung, J. (2014). Smartphone basic needs scale. *Computers in Human Behavior, 35,* 376–387. http://www.science-direct.com/science/article/pii/S0747563214001460

Kangas, J. L., Baldwin, A. S., Rosenfield, D., Smits, J. A. J., & Rethorst, C. D. (2015). Examining the moderating effect of depressive symptoms on the relation between exercise and self-efficacy during the initiation of regular exercise. *Health Psychology, 34*(5), 556–565. https://doi.org/10.1037/hea0000142

Kao, H. S., Xu, M., & Kao, T. T. (2021). Calligraphy, psychology and the Confucian literati personality. *Psychology and Developing Societies*, *33*(1), 54–72.

Kaplan, R., Atkins, C. J., & Reinsch, S. (1984). Specific efficacy expectations mediate exercise compliance in patients with COPD. *Health Psychology, 3,* 223–242.

Karimi, Z., Haghshenas, L., Mohtashami, T., & Dehkordi, M. A. (2019). Investigating the role of attachment styles, dysfunctional attitudes, and spirituality in predicting membership in addicted and non-addicted groups. *Psych Journal*, *8*(2), 169–179. https://doi.org/10.1002/pchj.254

Kariuki, T. S. M. P. W. (2020). University of Nairobi students gender differences in locus of control. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, *11*(3), 1372–1377.

Karl, K., Peluchette, J., & Schlaegel, C. (2010). Who's posting Facebook faux pas? A cross-cultural examination of personality differences. *International Journal of Selection and Assessment*, *18*(2), 174–186.

Karterud, S., Pedersen, G., Johansen, M., Wilberg, T., Davis, K., & Panksepp, J. (2016). Primary emotional traits in patients with personality disorders. *Personality and Mental Health*, *10*(4), 261–273.

Kashdan, T. B., Goodman, F. R., Disabato, D. J., McKnight, P. E., Kelso, K., & Naughton, C. (2020). Curiosity has comprehensive benefits in the workplace: Developing and validating a multidimensional workplace curiosity scale in United States and German employees. *Personality and Individual Differences*, *155*, 109717. https://doi.org/10.1016/j.paid.2019.109717

Kashdan, T. B., Stiksma, M. C., Disabato, D. J., McKnight, P. E., Bekier, J., Kaji, J., & Lazarus, R. (2018). The five-dimensional curiosity scale: Capturing the bandwidth of curiosity and identifying four unique subgroups of curious people. *Journal of Research in Personality*, *73*, 130–149.

Kashima, Y., Kokubo, T., Kashima, E., Boxall, D., Yamaguchi, S., & Macrae, K. (2004). Cultural and self: Are there within-culture differences in self between metropolitan areas and regional cities? *Personality and Social Psychology Bulletin, 30,* 816–823.

Kasler, J., & Nevo, O. (2005). Early recollections as predictors of study area choice. *Journal of Individual Psychology, 61,* 217–232.

Kaspar, K., Buß, L. V., Rogner, J., & Gnambs, T. (2016). Engagement in one-night stands in Germany and Spain: Does personality matter? *Personality and Individual Differences*, *92*, 74–79. https://doi.org/10.1016/j.paid.2015.12.013

Kasser, T., Koestner, R., & Lekes, N. (2002). Early family experiences and adult values: A 26-year, prospective longitudinal study. *Personality and Social Psychology Bulletin, 28*(6), 826–835.

Kaufman, J., & Bristol, A. (2001). When Allport met Freud: Using anecdotes in the teaching of psychology. *Teaching of Psychology, 28,* 44–46.

Kaufman, S. B. (2018). Self-actualizing people in the 21st century: Integration with contemporary theory and research on personality and well-being. *Journal of Humanistic Psychology*, *63*(1), 51–83. https://doi.org/10.1177/0022167818809187

Kay, C. S., & Saucier, G. (2020). Insert a joke about lawyers: Evaluating preferences for the Dark Triad traits in six occupations. *Personality and Individual Differences*, *159*, 109863. https://doi-org.wake.idm.oclc.org/10.1016/j.paid.2020.109863

Kayiş, A., & Akcaoğlu, M. (2021). Big Five and Dark Triad personality traits as predictors of multicultural attitude and efficacy. *Current Issues in Personality Psychology*, *9*(3), 215–228.

Kazdin, A. E. (1989). *Behavior modification in applied settings* (4th ed.). Brooks/Cole.

Kazdin, A. E., & Bootzin, R. (1972). The token economy: An evaluative review. *Journal of Applied Behavioral Analysis, 5,* 343–372.

Keller, L., Bieleke, M., & Wolff, W. (2021). Bursting balloons—comparison of risk taking between extreme sports, esports, and the general public. *Current Psychology*, 1–12. https://doi.org/10.1007/s12144-021-02616-4

Kelley, H. M., Siwatu, K. O., Tost, J. R., & Martinez, J. (2015). Culturally familiar tasks on reading performance and self-efficacy of culturally and linguistically diverse students. *Educational Psychology in Practice*, *31*(3), 293–313.

Kelly, G. A. (1955). *The psychology of personal constructs*. Norton.

Kelly, G. A. (1958). The theory and technique of assessment. *Annual Review of Psychology, 9,* 323–352.

Kelly, G. A. (1969). *Clinical psychology and personality: The selected papers of George Kelly*. B. Maher (Ed.). Wiley.

Keltikangas-Jaruinen, L., & Raikkonen, K. (1990). Healthy and maladjusted Type A behavior in adolescents. *Journal of Youth and Adolescence, 19,* 1–18.

Keltner, D. (1997). Facial expression, personality, and psychopathology. In P. Ekman & E. L. Rosenberg (Eds.), *What the face reveals* (pp. 450–452). Oxford University Press.

Keniston, K. (1983, June). Remembering Erikson at Harvard. *Psychology Today,* p. 29.

Kenrick, D., Griskevicius, S., Neuberg, S., & Schaller, M. (2010). Renovating the pyramid of needs: Contemporary extensions built upon ancient foundations. *Psychological Science, 5*(3), 292–314.

Kerchhoff, L. J., Davids, E. L., & Roman, N. V. (2017). Adolescent goals and aspirations in search of psychological well-being: From the perspective of self-determination theory. *South African Journal of Psychology, 47*(1), 121–132.

Kerestes, G. (2006). Birth order and maternal ratings of infant temperament. *Studia Psychologica, 48,* 95–106.

Kerr, N. (1984). The tyranny of the shoulds. *Perspectives in Psychiatric Care, 22,* 16–19.

Keupp, S., Bancken, C., Schillmöller, J., Rakoczy, H., & Behne, T. (2016). Rational over-imitation: Preschoolers consider material costs and copy causally irrelevant actions selectively. *Cognition*, *147*, 85–92.

Keyes, C., Shmotkin, D., & Ryff, D. (2002). Optimizing wellbeing: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82,* 1007–1022.

Khan, A. S., Baloch, B. A., Shahzad, F., & Tahir, M. S. (2020). Feelings of loneliness, learned helplessness and depression during COVID-19 forced lockdown in Pakistan. *Journal of Professional & Applied Psychology*, *1*(2), 62–69.

Khan, F., Jami, F., & Khalid, R. (2017). Parental modeling as predictor of filial obligation in young adults. *Pakistan Journal of Psychology*, *48*(2).

Khan, M., Breitenecker, R., & Schwarz, E. (2014). Entrepreneurial team locus of control: Diversity and trust. *Management Decision, 52,* 1057–1081.

Khodarahimi, S. (2014, August 9). Sensation-seeking and risk-taking behaviors: A study on young Iranian adults. *Applied Research in Quality of Life*. http://www.researchgate.net/publication/264616810_Sensation-Seeking_and_Risk-Taking_Behaviors_A_Study_on_Young_Iranian_Adults

Kiang, L., Witkow, M., Baldomar, O., & Fuligni, A. (2010). Change in ethnic identity across the high school years among adolescents with Latin American, Asian, and European background. *Journal of Youth and Adolescence, 39,* 683–693.

Kieslinger, K., Wartha, O., Pollatos, O., Steinacker, J. M., & Kobel, S. (2021). Parental self-efficacy—a predictor of children's health behaviors? Its impact on children's physical activity and screen media use and potential interaction effect within a health promotion program. *Frontiers in Psychology*, *12*, 712796.

Kihlstrom, J. F. (1994). Psychodynamics and social cognition. *Journal of Personality, 62,* 681–696.

Kim, E., Hogge, I., & Salvisberg, C. (2014). Effects of self-esteem and ethnic identity: Acculturative stress and psychological well-being among Mexican immigrants. *Hispanic Journal of Behavioral Sciences, 36,* 144–163.

Kim, E. S., Chopik, W. J., & Smith, J. (2014). Are people healthier if their partners are more optimistic? The dyadic effect of optimism on health among older adults. *Journal of Psychosomatic Research*, *76*(6), 447–453.

Kim, H. R., Toyokawa, W., & Kameda, T. (2019). How do we decide when (not) to free-ride? Risk tolerance predicts behavioral plasticity in cooperation. *Evolution and Human Behavior*, *40*(1), 55–64. https://doi.org/10.1016/j.evolhumbehav.2018.08.001

Kim, K. H., & Park, S. A. (2018). Horticultural therapy program for middle-aged women's depression, anxiety, and self-identify. *Complementary Therapies in Medicine*, *39*, 154–159.

King, L. A. (2001). The hard road to the good life: The happy, mature person. *Journal of Humanistic Psychology*, *41*(1), 51–72.

King, L. A., & Napa, C. K. (1998). What makes a life good? *Journal of Personality and Social Psychology, 75,* 156–165.

King Miller, B. A., Stevenson, A. D., & Casler-Failing, S. L. (2021). Expanding STEM membership: Using science process skills in a social justice curriculum to combat stereotype threats and build self-efficacy in African American students. *Journal of Educational Research and Practice*, *11*(1), 19.

Kipp, L. E., & Weiss, M. R. (2015). Social predictors of psychological need satisfaction and well-being among female adolescent gymnasts: A longitudinal analysis. *Sport, Exercise, and Performance Psychology, 4*(3), 153–169. https://doi.org/10.1037/spy0000033

Kirschenbaum, H. (2009). *The life and work of Carl Rogers.* American Counseling Association.

Kirschenbaum, H., & Jourdan, A. (2005). The current status of Carl Rogers and the person-centered approach.

Psychotherapy: Theory, Research, Practice, Training, 42, 37–51.

Kivimaki, M., Vahtera, J., Elovainio, M., Helenius, H., Singh-Manoux, A., & Pentti, J. (2005). Optimism and pessimism as predictors of change in health after death or onset of severe illness in family. *Health Psychology, 24,* 413–421.

Kıvrak, Y. (2018). Psychosexual stages of development and its relationship with depression and anxiety. *Psychiatry and Clinical Psychopharmacology*, *28*, 69.

Klahr, A., & Burt, S. (2014). Elucidating the etiology of individual differences in parenting: A meta-analysis of behavioral genetic research. *Psychological Bulletin, 140,* 544–586.

Klein, M. H., Malthieu, P. L., Gendlin, E. T., & Kiesler, D. J. (1969). *The experiencing scale: A research and training manual.* Wisconsin Psychiatric Institute.

Klein, N. (2017). Prosocial behavior increases perceptions of meaning in life. *The Journal of Positive Psychology*, *12*(4), 354–361. http://dx.doi.org/10.1080/17439760.2016.1209541

Klimstra, T., Hale, W., Raaijmakers, Q., Branje, S., & Meeus, W. (2010). Identity formation in adolescence: Change or stability? *Journal of Youth and Adolescence, 39*(2), 150–162.

Kloep, M., Güney, N., Cok, F., & Simsek, Ö. F. (2009). Motives for risk-taking in adolescence: A cross-cultural study. *Journal of Adolescence, 32*(1), 135–151.

Klug, H., & Maier, G. (2015). Linking goal progress and subjective well-being: A meta-analysis. *Journal of Happiness Studies, 16,* 37–65.

Klussman, K., Curtin, N., Langer, J., & Nichols, A. L. (2022). The importance of awareness, acceptance, and alignment with the self: A framework for understanding self-connection. *Europe's Journal of Psychology*, *18*(1), 120.

Knežević, M. (2018). To go or not to go: Personality, behaviour and neurophysiology of impulse control in men and women. *Personality and Individual Differences*, *123*, 21–26. https://doi.org/10.1016/j.paid.2017.10.039

Koban, K., Stein, J.-P., Eckhardt, V., & Ohler, P. (2018). Quid pro quo in Web 2.0. Connecting personality traits and Facebook usage intensity to uncivil commenting intentions in public online discussions. *Computers in Human Behavior*, *79*, 9–18.

Kochanska, G., Gross, J. N., Lin, M. H., & Nichols, K. E. (2002). Guilt in young children: Development, determinants, and relations with a broader system of standards. *Child Development, 73*, 461–482.

Kochanska, G., Lee Clark, A., & Goldman, M. S. (1997). Implications of mothers' personality for their parenting and their young children's developmental outcomes. *Journal of Personality*, *65*(2), 387–420.

Kokun, O. (2022). Development and validation of the Professional Self-Fulfilment Questionnaire. *Pakistan Journal of Psychological Research*, *37*(4), 585–603.

Kolosov, A. B., Volianiuk, N. Y., Lozhkin, G. V., Buniak, N. A., & Osodlo, V. I. (2019). Personal determinants of mental reliability of an athlete. *Pedagogics, Psychology, Medical-Biological Problems of Physical Training and Sports, 23*(2), 83–89.

Komissarouk, S., Harpaz, G., & Nadler, A. (2017). Dispositional differences in seeking autonomy-or dependency-oriented help: Conceptual development and scale validation. *Personality and Individual Differences*, *108*, 103–112.

Kong, F., Gong, X., Sajjad, S., Yang, K., & Zhao, J. (2019). How is emotional intelligence linked to life satisfaction? The mediating role of social support, positive affect and negative affect. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, *20*(8), 2733–2745. https://doi.org/10.1007/s10902-018-00069-4

Konu, A., Lintonen, T., & Rimpelae, M. (2002). Factors associated with schoolchildren's general subjective well-being. *Health Education Research, 17,* 155–165.

Kopp, R., & Eckstein, D. (2004). Using early memory metaphors and client-generated metaphors in Adlerian therapy. *Journal of Individual Psychology, 60,* 163–174.

Koren, M. (2013, March 20). B. F. Skinner: The man who taught pigeons to play ping-pong and rats to pull levers. *Smithsonian.com*. http://www.smithsonianmag.com/ist/? next=/science-nature/bf-skinner-the-man-who-taught-pigeons-to-play-ping-pong-and-rats-to-pull-levers-5363946/

Korman, J. V., Van Quaquebeke, N., & Tröster, C. (2022). Managers are less burned-out at the top: The roles of sense of power and self-efficacy at different hierarchy levels. *Journal of Business and Psychology*, 1–21.

Kosaka, Y. (2008). Developmental changes in inferiority feelings in adolescents and young adults: Important areas of the self. *Japanese Journal of Educational Psychology, 56,* 218–229.

Kosciw, J., Palmer, N., & Kull, R. (2014, April 2). Reflecting resiliency: Openness about sexual orientation and/or gender identity and its relationship to well-being and educational outcomes for LGBT students. *American Journal of Community Psychology.* http://link.springer.com/article/10.1007% 2Fs10464–014–9642–6

Kotov, R., Gamez, W., Schmidt, F., & Watson, D. (2010). Linking "Big" personality traits to anxiety, depressive, and substance use disorders: A meta-analysis. *Psychological Bulletin, 136*(5), 768–821.

Kowal, D. S., Kumar, A., & Kidwai, F. (2016). Risk taking behaviour and career choice among youth aspiring to be an officer in Indian Armed Force. *The International Journal of Indian Psychology, 3*(2, No. 9), 41.

Koydemir, S., Şimşek, Ö. F., & Demir, M. (2014). Pathways from personality to happiness: Sense of uniqueness as a mediator. *Journal of Humanistic Psychology*, *54*(3), 314–335.

Krabbenborg, M. A., Boersma, S. N., van der Veld, W. M., Vollebergh, W. A., & Wolf, J. R. (2017). Self-determination in relation to quality of life in homeless young adults: Direct and indirect effects through psychological distress and social support. *The Journal of Positive Psychology*, *12*(2), 130–140.

Kracke, W. (2010). Dream interpretation in the Amazon. *Journal of Developmental and Behavioral Pediatrics, 31*(4), 367–368.

Krahe, B., Busching, R., & Möller, I. (2012). Media violence use and aggression among German adolescents: Associations and trajectories of change in a three-wave longitudinal study. *Psychology of Popular Media Culture, 1,* 152–166.

Krahé, B., & Möller, I. (2004). Playing violent electronic games, hostile attributional style, and aggression-related norms in German adolescents. *Journal of Adolescence*, *27*(1), 53–69.

Krampen, G. (2013). Subjective well-being of children in the context of educational transitions: Cross-sequential results from two European countries with different school systems. *Europe's Journal of Psychology*, *9*(4), 744–763.

Krems, J. A., Kenrick, D. T., & Neel, R. (2017). Individual perceptions of self-actualization: What functional motives are linked to fulfilling one's full potential? *Personality and Social Psychology Bulletin*, *43*(9), 1337–1352. https://doi.org/10.1177/0146167217713191

Krieger, A. A., Möller, C., Zmyj, N., & Aschersleben, G. (2016). Tom is not more likely to imitate Lisa than Ying: The influence of a model's race indicated by physical appearance on children's imitation. *Frontiers in Psychology*, *7*, 972.

Kristensen, P., & Bjerkedal, T. (2007). Explaining the relation between birth order and intelligence. *Science, 316,* 1717.

Kritzler, S., Krasko, J., & Luhmann, M. (2020). Inside the happy personality: Personality states, situation experience, and state affect mediate the relation between personality and affect. *Journal of Research in Personality*, *85*, 103929. https://doi.org/10.1016/j.jrp.2020.103929.

Kroger, J., Martinussen, M., & Marcia, J. (2010). Identity status during adolescence and young adulthood: A meta-analysis. *Journal of Adolescence, 33,* 683–689.

Kron, T. (2020). Dreaming under fire: The psyche in times of continuous stress. *Journal of Analytical Psychology*, *65*(1), 75–87.

Kronström, K., Karlsson, H., Nabi, H., Oksanen, T., Salo, P., Sjösten, N., Virtanen, M., Pentti, J., Kivimäki, M., & Vahtera, J. (2014). Optimism and pessimism as predictors of initiating and ending an antidepressant medication treatment. *Nordic Journal of Psychology, 68,* 1–7.

Kross, E., Verduyn, P., Demiralp, E., Park, J., Lee, D., Lin, N., Shablack, H., Jonides, J., Ybarra, O. (2013). Facebook use predicts declines in subjective wellbeing. *PLoS ONE, 8*(8). http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0069841

Krüll, M. (1986). *Freud and his father.* New York: Norton.

Krumov, K. D., Larsen, K. S., Liu, J., Schneider, J. F., Krumova, A. K., Widodo, E., Juhasz, M., Garvanova, M., Kumar, S., & Repaczki, R. (2022). Health locus of control in a pandemic situation: Cross-cultural differences between European and Asian respondents. *Health Psychology Report*, *10*(3), 227–237.

Krupić, D., Ručević, S., & Vučković, S. (2020). From parental personality over parental styles to children psychopathic tendencies. *Current Psychology*, 1–10.

Kryazh, I. (2019). The positive effect of nature connectedness on psychological wellbeing: The significance of trust as a mediator. *Psychology, Journal of Higher School of Economics*, *16*(1), 27–49.

Kulshrestha, U., & Sen, C. (2006). Subjective well-being in relation to emotional intelligence and locus of control among executives. *Journal of the Indian Academy of Applied Psychology, 32,* 129–134.

Kunzmann, U., Little, T., & Smith, J. (2000). Is age-related stability of subjective well-being a paradox? Cross-sectional and longitudinal evidence from the Berlin Aging Study. *Psychology and Aging, 15,* 511–526.

Kuo, T., & Tang, L. (2014). Relationships among personality traits, Facebook usages and leisure activities: A case of Taiwanese college students. *Computers in Human Behavior, 31,* 13–19.

Kupfersmid, J. (1995). Does the Oedipus complex exist? *Psychotherapy: Theory, Research, Practice, Training, 32,* 535–547.

Kurman, J. (2001). Self-enhancement: Is it restricted to individualistic cultures? *Personality and Social Psychology Bulletin, 27,* 1705–1716.

Kurtović, A., Vuković, I., & Gajić, M., (2018). The effect of locus of control on university students' mental health: Possible mediation through self-esteem and coping, *The Journal of Psychology*, *152*(6), 341–357. https://doi.org/10.1080/00223980.2018.1463962

Kushlev, K., Dunn, E. W., & Lucas, R. E. (2015). Higher income is associated with less daily sadness but not more daily happiness. *Social Psychological and Personality Science, 6*(5), 483–489. https://doi.org/10.1177/1948550614568161

Kuška, M., Trnka, R., Kuběna, A. A., & Růžička, J. (2016). Free associations mirroring self- and world-related concepts: Implications for personal construct theory, psycholinguistics and philosophical psychology. *Frontiers in Psychology*, *7*.

Kutta, T. J., Preston, T. J., & Maranges, H. M. (2020). Costa/McCrae vs. Goldberg Five Factors. In B. J. Carducci (Editor-in-Chief) & C. S. Nave (Vol. Ed.), *The Wiley-Blackwell encyclopedia of personality and individual differences: Vol. I. Models and theories.* John Wiley & Sons.

Kuyumcu, B., & Rohner, R. P. (2018). The relation between remembered parental acceptance in childhood and self-acceptance among young Turkish adults. *International Journal of Psychology*, *53*(2), 126–132.

Labouvie-Vief, G., & Diehl, M. (2000). Cognitive complexity and cognitive-affective integration: Related or separate domains of adult development? *Psychology and Aging*, *15*(3), 490.

Labrague, L. J. (2014). Facebook use and adolescents' emotional states of depression, anxiety, and stress. *Health and Science Journal, 8*(1), 80–89.

Lachman, M. E., & Firth, K. M. (2004). The adaptive value of feeling in control during midlife. *How Healthy Are We*, 320–349.

Lachman, M. E., Rosnick, C. B., & Röcke, C. (2009). The rise and fall of control beliefs and life satisfaction in adulthood: Trajectories of stability and change over ten years. In H. B. Bosworth & C. Hertzog (Eds.), *Aging and cognition: Research methodologies and empirical advances* (pp. 143–160). American Psychological Association. https://doi.org/10.1037/11882-007

Lackner, R. J., Moore, M. T., Minerovic, J. R., & Fresco, D. M. (2015). Explanatory flexibility and explanatory style in treatment-seeking patients with Axis I psychopathology. *Cognitive Therapy and Research*, *39*, 736–743.

LaFountain, R. (2009). Alfred Adler's place in the field of psychology. *General Psychologist, 44*(2), 22–25.

Laird, T., & Shelton, A. (2006). From an Adlerian perspective: Birth order, dependency, and binge drinking on a historically Black university campus. *Journal of Individual Psychology, 62,* 18–35.

Lam, L., & Peng, Z. (2010). Effect of pathological use of the Internet on adolescent mental health. *Archives of Pediatric and Adolescent Medicine, 164,* 901–908.

Lam, R., & Tam, V. (2011). Correlates of identity statuses among Chinese adolescents in Hong Kong. *International Journal of Adolescent Medicine and Health, 23,* 51–58.

Lamberson, K. A., & Wester, K. L. (2018). Feelings of Inferiority: A first attempt to define the construct empirically. *The Journal of Individual Psychology, 74*(2), 172–187. https://doi.org/10.1353/jip.2018.0011

Lambrecht, S., Shredl, M., Henley-Einion, J., & Blagrove, M. (2013). Self-rated effects of reading, TV viewing and daily activities on dreaming in adolescents and adults: The UK library study. *International Journal of Dream Research, 6,* 41–44.

Landgraf, D., Long, J., Der-Avakian, A., Streets, M., & Welsh, D. K. (2015). Dissociation of learned helplessness and fear conditioning in mice: A mouse model of depression. *PLoS One*, *10*(4), e0125892.

Landry, N., Gifford, R., Milfont, T. L., Weeks, A., & Arnocky, S. (2018). Learned helplessness moderates the relationship between environmental concern and behavior. *Journal of Environmental Psychology*, *55*, 18–22.

Lang, F., & Heckhausen, J. (2001). Perceived control over development and subjective well-being: Differential benefits across adulthood. *Journal of Personality and Social Psychology, 81,* 509–523.

Lang, F. R., John, D., Ludtke, O., Schupp, J., & Wagner, G. G. (2011). Short assessment of the Big Five: Robust across survey methods except telephone interviewing. *Behavior Research Methods, 43*, 548–567.

Lang, R., & Rispoli, M. (2015). Introduction to the special issue: Behavioral interventions to enhance academic outcomes. *Behavior Modification, 39,* 3–7.

Lange, J., Paulhus, D. L., & Crusius, J. (2018). Elucidating the dark side of envy: Distinctive links of benign and malicious envy with dark personalities. *Personality and Social Psychology Bulletin*, *44*(4), 601–614.

Lansing, A. H., Berg, C. A., Butner, J., & Wiebe, D. J. (2016). Self-control, daily negative affect, and blood glucose control in adolescents with Type 1 diabetes. *Health Psychology*, *35*(7), 643.

Lansu, T. A., Cillessen, A. H., & Karremans, J. C. (2015). The effects of social status and self-esteem on imitation and choice of a popular peer. *Journal of Relationships Research*, *6*, e14.

Larkins, J. M., & Sher, K. J. (2006). Family history of alcoholism and the stability of personality in young adulthood. *Psychology of Addictive Behaviors*, *20*(4), 471.

Laros, J. A., Peres, A. J. de S., de Andrade, J. M., & Passos, M. F. D. (2018). Validity evidence of two short scales measuring the Big Five personality factors. *Psicologia: Reflexão e Crítica*, *31*. https://doi.org/10.1186/s41155-018-0111-2

Larsen, R. J., & Kasimatis, M. (1991). Day-to-day symptoms: Individual differences in the occurrence, duration, and emotional concomitants of minor daily illness. *Journal of Personality, 59,* 387–423.

Larsson, H., Andershed, H., & Lichtenstein, P. (2006). A genetic factor explains most of the variation in the psychopathic personality. *Journal of Abnormal Personality, 115,* 221–230.

Larzelere, R. E., Knowles, S. J., Henry, C. S., & Ritchie, K. L. (2018). Immediate and long-term effectiveness of disciplinary tactics by type of toddler noncompliance. *Parenting*, *18*(3), 141–171.

Latham, K., & Peek, C. W. (2013). Self-rated health and morbidity onset among late midlife US adults. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *68*(1), 107–116.

Lathia, N., Sandstrom, G. M., Mascolo, C., & Rentfrow, P. J. (2017). Happier people live more active lives: Using smartphones to link happiness and physical activity. *PLoS One, 12*(1), Article e0160589. https://doi.org/10.1371/journal.pone.0160589

Lau, J., Rijsdijk, F., & Eley, C. (2006). I think, therefore I am: A twin study of attributional style in adolescents. *Journal of Child Psychology and Psychiatry, 47,* 696–703.

Laursen, B., Pulkkinen, L., & Adams, R. (2002). The antecedents and correlates of agreeableness in adulthood. *Developmental Psychology, 38,* 591–603.

Lavrijsen, J., Soenens, B., Vansteenkiste, M., & Verschueren, K. (2023). When insecure self-worth drains students' energy: Academic contingent self-esteem and parents' and teachers' perceived conditional regard as predictors of school burnout. *Journal of Youth and Adolescence*, *52*(4), 810–825. https://doi.org/10.1007/s10964-023-01749-y

Law, D., Shapka, J., & Olson, B. (2010). To control or not to control? Parenting behaviors and adolescent online aggression. *Computers in Human Behavior, 26*(6), 1651–1656.

Lawton, K. E., Kapke, T. L., & Gerdes, A. C. (2016). Understanding parental locus of control in Latino parents: Examination of cultural influences and help-seeking intentions for childhood ADHD. *Cultural Diversity and Ethnic Minority Psychology, 22*(2), 288–298. https://doi.org/10.1037/cdp0000022

Le, T., Lai, M., & Wallen, J. (2009). Multiculturalism and subjective happiness as mediated by cultural and relational variables. *Cultural Diversity and Ethnic Minority Psychology, 15*(3), 303–313.

Leak, G. (2006a). Development and validation of a revised measure of Adlerian social interest. *Social Behavior and Personality, 34,* 443–450.

Leak, G. (2006b). An empirical assessment of the relationship between social interest and spirituality. *Journal of Individual Psychology, 62,* 59–69.

Leak, G., & Leak, K. (2006). Adlerian social interest and positive psychology. *Journal of Individual Psychology, 62,* 207–223.

LeBlanc, S., Uzun, B., & Aydemir, A. (2021). Structural relationship among mindfulness, reappraisal and life satisfaction: The mediating role of positive affect. *Current Psychology*, *40*, 4406–4415.

Lee, H., Offidani, E., Ziegelstein, R., Bienvenu, O., Samuels, J., Eaton, W., & Nestadt, G. (2014). Five-factor model personality traits as predictors of incident coronary heart disease in the community: A ten-and-a-half year cohort study based on the Baltimore Epidemiologic Catchment Area Follow-Up Study. *Psychosomatics: Journal of Consultation and Liaison Psychiatry, 55,* 352–361.

Lee, J., & Lee, R. (2014, June 20). Examining forms of discrimination and ethnic identity on adjustment. *APA Division 45, Society for the Psychological Study of Ethnic Minority Issues. Research Conference Presentation.* http://psycnet.apa.org/psy-cextra/517842014–001.pdf

Lee, J. N. T., Foo, K. H., Adams, A., Morgan, R., & Frewen, A. (2015). Strengths of character, orientations to happiness, life satisfaction and purpose in Singapore. *Journal of Tropical Psychology*, *5*, e2. https://doi.org/10.1017/jtp.2015.2

Lee, K., & Ashton, M. C. (2019). Not much H in the Big Five Aspect Scales: Relations between BFAS and HEXACO-PI-R Scales. *Personality and Individual Differences*, *144*, 164–167. https://doi.org/10.1016/j.paid.2019.03.010

Lee, K., Ashton, M. C., & de Vries, R. E. (2022). Examining the expanded agreeableness scale of the BFI-2. *Personality and Individual Differences*, *195*, 111694. https://doi.org/10.1016/j.paid.2022.111694

Lee, M., Okazaki, S., & Yoo, H. (2006). Frequency and intensity of social anxiety in Asian Americans and European Americans. *Cultural Diversity and Ethnic Minority Psychology, 12,* 291–305.

Lee, N., Lazaro, V., Wang, J. J., Şen, H. H., & Lucca, K. (2023). Exploring individual differences in infants' looking preferences for impossible events: The Early Multidimensional Curiosity Scale. *Frontiers in Psychology, 13*, 1015649. https://doi.org/10.3389/fpsyg.2022.1015649

Lee, S., Wang, T., & Ren, X. (2020). Inner speech in the learning context and the prediction of students' learning strategy and academic performance. *Educational Psychology*, *40*(5), 535–549.

Lee, Y. C., Wu, W. L., & Lee, Y. C. (2016). Explanatory style differences in health literacy: A survey among young adults in Taiwan. *Psychology, Health & Medicine*, *21*(2), 189–197.

Lee, Y. T., & Seligman, M. E. P. (1997). Are Americans more optimistic than the Chinese? *Personality and Social Psychology Bulletin, 23,* 32–40.

Leehr, E. J., Roesmann, K., Böhnlein, J., Dannlowski, U., Gathmann, B., Herrmann, M. J., Junghöfer, M., Schwarzmeier, H., Seeger, F. R., Siminski, N., Straube, T., Lueken, U., & Hilbert, K. (2021). Clinical predictors of treatment response towards exposure therapy in virtuo in spider phobia: A machine learning and external cross-validation approach. *Journal of Anxiety Disorders*, *83*, 102448.

Leeman, M. S., Dispenza, F., & Chang, C. Y. (2015). Lifestyle as a predictor of posttraumatic growth. *The Journal of Individual Psychology, 71*(1), 58–74. https://doi.org/10.1353/jip.2015.0007

Lefkowitz, M. M., & Tesiny, E. P. (1984). Rejection and depression: Prospective and contemporaneous analysis. *Developmental Psychology, 20,* 776–785.

Leikas, S., & Ilmarinen, V. J. (2017). Happy now, tired later? Extraverted and conscientious behavior are related to immediate mood gains, but to later fatigue. *Journal of Personality*, *85*(5), 603–615.

Leising, D., Borkenau, P., Zimmermann, J., Roski, C., Leonhardt, A., & Schutz, A. (2013). Positive self-regard and claim to leadership: Two fundamental forms of self-evaluation. *European Journal of Personality, 27,* 565–579.

Lemberger-Truelove, T. (2018). Belonging, striving, and style of life among Black women in the Southwestern United States. *The Journal of Individual Psychology, 74*(1), 75–95. https://doi.org/10.1353/jip.2018.0005

Leng, J., Guo, Q., Ma, B., Zhang, S., & Sun, P. (2020). Bridging personality and online prosocial behavior: The roles of empathy, moral identity, and social self-efficacy. *Frontiers in Psychology*, *11*, 575053.

Leonard, R., & Burns, A. (2006). Turning points in the lives of midlife and older women: Five-year follow-up. *Australian Psychologist, 41,* 28–36.

Leontopoulou, S. (2006). Resilience of Greek youth at an educational transition point: The role of locus of control and coping strategies as resources. *Social Indicators Research, 76,* 95–126.

Leslie, S. J., Cimpian, A., Meyer, M., & Freeland, E. (2015). Expectations of brilliance underlie gender distributions across academic disciplines. *Science*, *347*(6219), 262–265.

Lester, D. (1990). Maslow's hierarchy of needs and personality. *Personality and Individual Differences, 11,* 1187–1188.

Letzring, T. D., Block, J., & Funder, D. C. (2005). Ego-control and ego-resiliency: Generalization of self-report scales based on personality descriptions from acquaintances, clinicians, and the self. *Journal of Research in Personality*, *39*(4), 395–422.

Leung, B., Moneta, G., & McBride-Chang, C. (2005). Think positively and feel positively: Optimism and life satisfaction in late life. *International Journal of Aging and Human Development, 61,* 335–365.

Levenson, M. R. (1990). Risk taking and personality. *Journal of Personality and Social Psychology, 58,* 1073–1080.

Levinson, D. J. (1996). *The seasons of a woman's life.* Knopf.

Lewis, C., Varvatsoulias, G., & George, W. (2012). The psychological type profile of Greek Orthodox churchgoers in London. *Mental Health, Religion and Culture, 15,* 979–986.

Lewis, E. G., & Cardwell, J. M. (2020). The Big Five personality traits, perfectionism and their association with mental health among UK students on professional degree programmes. *BMC Psychology*, *8*, 1–10.

Lewis, J. (2014, February 25). Internet trolls are also real-life trolls. *Psychology Headquarters, The Guardian*. http://www.theguardian.com/science/head-quarters/2014/feb/25/Internet-trolls-are-also-real-life-trolls

Li, F., McAuley, E., Harmer, P., Duncan, T. E., & Chaumeton, N. R. (2001). Tai Chi enhances self-efficacy and exercise behavior in older adults. *Journal of Aging and Physical Activity, 9*(2), 161–171.

Li, H., & Cao, Y. (2021). Facing the pandemic in the dark: Psychopathic personality traits and life history strategies during COVID-19 lockdown period in different areas of China. *Current Psychology*, 1–9.

Li, J., Jia, L., Cai, Y., Kwan, H. K., & You, S. (2020). Employee–organization relationships and team performance: Role of team collective efficacy. *Frontiers in Psychology*, *11*, 206.

Li, M., Mardhekar, V., & Wadkar, A. (2012). Coping strategies and learned helplessness of employed and nonemployed educated married women from India. *Health Care for Women International, 33,* 495–508.

Li, T., & Feng, F. (2018). Goal content, well-being, and psychological needs satisfaction in Chinese adolescents. *Social Behavior and Personality: An International Journal*, *46*(4), 541–550. https://doi.org/10.2224/sbp.6831

Li, X., Jusup, M., Wang, Z., Li, H., Shi, L., Podobnik, B., Stanley, H. E., Havlin, S., & Boccaletti, S. (2018). Punishment diminishes the benefits of network reciprocity in social dilemma experiments. *Proceedings of the National Academy of Sciences*, *115*(1), 30–35.

Li, Y. (2010). Research on the relationship between self-efficacy, marital adjustment, occupational stress and subjective wellbeing of primary and secondary school headteachers. *Chinese Journal of Clinical Psychology, 18,* 363–365.

Li, Y., Ma, X., Li, C., & Gu, C. (2021). Self-consistency congruence and smartphone addiction in adolescents: The mediating role of subjective well-being and the moderating role of gender. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.766392

Libran, E., & Howard, V. (2006). Personality dimensions and subjective well-being. *Spanish Journal of Psychology, 9,* 38–44.

Lieberman, M. A., Yalom, I. D., & Miles, M. B. (1973). *Encounter groups: First facts*. Basics.

Lillevoll, K., Kroger, J., & Martinussen, M. (2013). Identity status and anxiety: A meta-analysis. *Identity: An International Journal of Theory and Research, 13,* 214–227.

Lin, Y., & Raghubir, P. (2005). Gender differences in unrealistic optimism about marriage and divorce. *Personality and Social Psychology Bulletin, 31,* 198–207.

Linares, K., Subrahmanyam, K., Cheng, R., & Guan, S. (2011). A second life within second life: Are virtual world users creating new selves and new lives? *International Journal of Cyber Behavior, Psychology and Learning, 1,* 50–71.

Lincoln, T. M., Riehle, M., Pillny, M., Helbig-Lang, S., Fladung, A. K., Hartmann-Riemer, M., & Kaiser, S. (2017). Using functional analysis as a framework to guide individualized treatment for negative symptoms. *Frontiers in Psychology, 8*, 2108.

Lindner, P., Dagöö, J., Hamilton, W., Miloff, A., Andersson, G., Schill, A., & Carlbring, P. (2021). Virtual reality exposure therapy for public speaking anxiety in routine care: A single-subject effectiveness trial. *Cognitive Behaviour Therapy*, *50*(1), 67–87.

Lindstrom, M. (2011). Social capital, political trust, and health locus of control: A population-based study. *Scandinavian Journal of Public Health, 39,* 3–9.

Lingiardi, F., & De Bei, F. (2011). Questioning the couch: Historical and clinical perspectives. *Psychoanalytic Psychology, 28,* 389–404.

Lisá, E., & Valachová, M. (2023). Dispositional employability and self-regulation in antisocial and prosocial personalities: Different contributions to employability. *BMC Psychology*, *11*(1), 7.

Lischetzke, T., & Eid, M. (2006). Why extraverts are happier than introverts: The role of mood regulation. *Journal of Personality, 74,* 1127–1162.

Littlefield, A. K., Stevens, A. K., Ellingson, J. M., King, K. M., & Jackson, K. M. (2016). Changes in negative urgency, positive urgency, and sensation seeking across adolescence. *Personality and Individual Differences*, *90*, 332–337. https://doi.org/10.1016/j.paid.2015.11.024

Litwin, H. (2005). Correlates of successful aging: Are they universal? *International Journal of Aging and Human Development, 61,* 313–333.

Liu, C., Xiao, X., Pi, Q., Tan, Q., & Zhan, Y. (2023). Are you more risk-seeking when helping others? Effects of situational urgency and peer presence on prosocial risky behavior. *Frontiers in Psychology*, *14*, 1036624. https://doi.org/10.3389/fpsyg.2023.1036624

Liu, M., & Guo, F. (2010). Parenting practices and their relevance to child behaviors in Canada and China. *Scandinavian Journal of Psychology*, *51*(2), 109–114.

Liu, M., & Guo, F. (2010). Patenting practices and their relevance to child behaviors in Canada and China. *European Journal of Personality, 23*(3), 153–182.

Liu, W., & Gumah, B. (2020). How perceived value of feedback influences its impact on self-efficacy. *Social Behavior and Personality: An International Journal*, *48*(6), 1–9.

Liu, W., Rochlen, A., & Mohr, J. (2005). Real and ideal gender-role conflict: Exploring psychological distress among men. *Psychology of Men and Masculinity, 6,* 137–148.

Livingston, N., Oost, K., Heck, N., & Cochran, B. (2014). Psychology of addictive behaviors: The role of personality in predicting drug and alcohol use among sexual minorities. *Psychology of Addictive Behaviors*. http://s1.labroots.com/user/publications/detail-search

/ipi/Pubmed/id/25347022/title/the-role-of-personality-in-predicting-drug-and-alcohol-use-among-sexual-minorities

Llamas, J., & Consoli, M. (2014). Freshman struggles: Role of locus of control on intragroup marginalization and distress. *American Psychological Association.* https://education.ucsb.edu/news/2014/gevirtz-school-faculty-and-students-take-part-16-events-2014-american-psychological

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Prentice-Hall.

Lockenhoff, C., Terracciano, A., & Costa, P. (2009). Five-factor model personality traits and the retirement transition: Longitudinal and cross-sectional associations. *Psychology and Aging, 24*(3)*,* 722–728.

Lodi-Smith, J., Ponterio, E. J., Newton, N. J., Poulin, M. J., Baranski, E., & Whitbourne, S. K. (2021). The codevelopment of generativity and well-being into early late life. *Psychology and Aging*, *36*(3), 299.

Loehlin, J. C., & Martin, N. G. (2001). Age changes in personality traits and their heritabilities during the adult years: Evidence from Australian twin registry samples. *Personality and Individual Differences*, *30*(7), 1147–1160.

Loftus, E., & Davis, D. (2006). Recovered memories. *Annual Review of Clinical Psychology, 2,* 469–498.

Loftus, E., & Ketcham, K. (1994). *False memories and allegations of sexual abuse.* New York: St. Martin's Press.

Lohr, J., Olatunji, B., Baumeister, R., & Bushman, B. (2007). The psychology of anger venting and empirically supported alternatives that do no harm. *Scientific Review of Mental Health Practice, 5,* 53–64.

Loman, M., Johnson, A., Quevedo, K., Lafavor, T., & Gunnar, R. (2014). Risk-taking and sensation-seeking propensity in postinstitutionalized early adolescents. *Journal of Child Psychology and Psychiatry, 55,* 1145–1152.

Londerville, S., & Main, M. (1981). Security of attachment, compliance, and maternal training methods in the second year of life. *Developmental Psychology, 17,* 289–299.

Lonnqvist, J., Itkonen, J., Verkasaio, M., & Poutvaara, P. (2014). The five-factor model of personality and degree and transitivity of Facebook social networks. *Journal of Research in Personality, 50,* 98–101.

Loo, C. M. (1998). *Chinese America: Mental health and quality of life in the inner city*. Sage.

Lopez, I. (2008). "But you don't look Puerto Rican": The moderating effects of ethnic identity on the relation between skin color and self-esteem among Puerto Rican women. *Cultural Diversity and Ethnic Minority Psychology, 14*(2), 102–108.

Lovik, A., Nassiri, V., Verbeke, G., Molenberghs, G., & Sodermans, A. K. (2017). Psychometric properties and comparison of different techniques for factor analysis on the Big Five Inventory from a Flemish sample. *Personality and Individual Differences*, *117*, 122–129. https://doi.org/10.1016/j.paid.2017.05.048

Lowell, A., Viezel, K., Davis, A., & Castillo, J. (2011). *Adaptive behavior in abused and neglected children.* American Psychological Association Convention Presentation.

Lucas, R., & Diener, E. (2001). Understanding extraverts enjoyment of social situations: The importance of pleasantness. *Journal of Personality and Social Psychology, 81,* 343–356.

Lucas, R., & Donnellan, M. (2009). Age differences in personality: Evidence from a nationally representative Australian sample. *Developmental Psychology, 45*(5)*,* 1353–1363.

Lucas, R., & Fujita, F. (2000). Factors influencing the relation between extraversion and pleasant affect. *Journal of Personality and Social Psychology, 79,* 1039–1056.

Luce, K., Winzelberg, A., Das, S., Osborne, M., Bryson, S., & Taylor, C. (2007). Reliability of self-report: Paper versus online administration. *Computers in Human Behavior, 23,* 1384–1389.

Lui, P. P., Rollock, D., Chang, E. C., Leong, F. T., & Zamboanga, B. L. (2016). Big 5 personality and subjective well-being in Asian Americans: Testing optimism and pessimism as mediators. *Asian American Journal of Psychology*, *7*(4), 274. https://doi.org/10.1037/aap0000054

Lukaszewski, A. W., Gurven, M., von Rueden, C. R., & Schmitt, D. P. (2017). What explains personality covariation? A test of the socioecological complexity hypothesis. *Social Psychological and Personality Science, 8*, 943–952.

Luyckx, K., Goossens, L., Soenens, B., Beyers, W., & Vansteenkiste, M. (2005). Identity statuses based on four rather than two identity dimensions: Extending and refining Marcia's paradigm. *Journal of Youth and Adolescence, 34,* 605–618.

Lynch, M. F., & Sheldon, K. M. (2017). Conditional regard, self-concept, and relational authenticity: Revisiting some key Rogerian concepts cross-culturally, through multilevel modeling. *Journal of Humanistic Psychology*, *60*(2), 168–186. https://doi.org/10.1177/0022167817696842

Lynn, M., & Steel, P. (2006). National differences in subjective well-being: The interactive effects of extraversion and neuroticism. *Journal of Happiness Studies, 7,* 155–165.

Lynne-Landsman, S., Graber, J., Nichols, T., & Botvin, G. (2011). Is sensation seeking a stable trait or does it change over time? *Journal of Youth and Adolescence, 40,* 48–58.

Lyons, D. (2002). Freer to be me: The development of executives at midlife. *Consulting Psychology Journal: Practice and Research, 54,* 15–27.

Lyubomirsky, S. (2001). Why are some people happier than others? The role of cognitive and motivational processes in well-being. *American Psychologist, 56,* 239–249.

Ma, F., Heyman, G. D., Jing, C., Fu, Y., Compton, B. J., Xu, F., & Lee, K. (2018). Promoting honesty in young children through observational learning. *Journal of Experimental Child Psychology*, *167,* 234–245.

MacDonald, K. (1995). Evolution, the five-factor model, and levels of personality. *Journal of Personality*, *63*(3), 525–567.

Machalicek, W., O'Reilly, M., Chan, J. M., Lang, R., Rispoli, M., Davis, T., Shogren, K. A., Sigafoos, J., Lancioni, G. E., Antonuzzi, M., Langthorne, P., & Andrews, A. (2009). Using videoconferencing to conduct functional analysis of challenging behavior and develop classroom behavioral support plans for students with autism. *Education and Training in Developmental Disabilities,* 207–217.

Mackavey, W. R., Malley, J. E., & Stewart, A. J. (1991). Remembering autobiographically consequential experiences: Content analysis of psychologists' accounts of their lives. *Psychology and Aging, 6,* 50–59.

Maddux, J. E. (2002). The power of believing you can. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 277–287). Oxford University Press.

Maddux, W. W., Bivolaru, E., Hafenbrack, A. C., Tadmor, C. T., & Galinsky, A. D. (2014). Expanding opportunities by opening your mind: Multicultural engagement predicts job market success through longitudinal increases in integrative complexity. *Social Psychological and Personality Science*, *5*(5), 608–615.

Magnus, K., Diener, E., Fujita, F., & Pavot, W. (1993). Extraversion and neuroticism as predictors of objective life events: A longitudinal analysis. *Journal of Personality and Social Psychology, 65,* 1046–1053.

Mahalik, J. R., Cournoyer, R. J., DeFranc, W., Cherry, M., & Napolitano, J. M. (1998). Men's gender role conflict and use of psychological defenses. *Journal of Counseling Psychology, 45,* 247–255.

Maher, H., Sumathi, D., & Winston, C. N. (2015). Object of desire or object of distress? Psychosocial functioning among securely and insecurely attached Indian young adults. *Psychoanalytic Psychology*, *32*(3), 432.

Mahomed, A., & Pretorius, C. (2022). Up-close and personal: Conceptualizing the self as dementia caregiver: A study in Soweto, South Africa. *Journal of Cross-Cultural Gerontology, 37*(4), 355–374.

Mahoney, J., Thompson-Lake, D., Cooper, K., Verrico, C., Newton, T., & De la Garza, R. (2015). A comparison of impulsivity, depressive symptoms, lifetime stress and sensation seeking in healthy controls versus participants with cocaine and methamphetamine use disorders. *Journal of Psychopharmacology, 28,* 50–56.

Mahoney, P. (1992). Freud as a family therapist: Reflections. In T. Gelfand & J. Kerr (Eds.), *Freud and the history of psychoanalysis* (pp. 307–317). Hillsdale, NJ: Analytic Press.

Mahoney, P. J. (1986). *Freud and the rat man*. New Haven, CT: Yale University Press.

Maier, S. F., Laudenslager, M., & Ryan, S. M. (1985). Stressor controllability, immune function, and endogenous opiates. In F. R. Brush & J. B. Overmier (Eds.), *Affect, conditioning, and cognition: Essays on the determinants of behavior* (pp. 203–210). Erlbaum.

Maina, I. W., Belton, T. D., Ginzberg, S., Singh, A., & Johnson, T. J. (2018). A decade of studying implicit racial/ethnic bias in healthcare providers using the implicit association test. *Social Science & Medicine*, *199*, 219–229.

Maio, G. R., Fincham, F. D., & Lycett, E. J. (2000). Attitudinal ambivalence toward parents and attachment style. *Personality and Social Psychology Bulletin, 26,* 1451–1464.

Maister, L., Hodossy, L., Tsakiris, M., & Shinskey, J. L. (2020). Self or (m)other? Infants' sensitivity to bodily overlap with their mother reflects their dyadic coordination. *Child Development*, *91*(5), 1631–1649. https://doi.org/10.1111/cdev.13361

Mäkikangas, A., & Kinnunen, U. (2003). Psychosocial work stressors and well-being: Self-esteem and optimism as moderators in a one-year longitudinal sample. *Personality and Individual Differences*, *35*(3), 537–557.

Malloy, T., Albright, L., Diaz-Loving, R., Dong, Q., & Lee, Y. (2004). Agreement in personality judgments within and between nonoverlapping social groups in collectivist cultures. *Personality and Social Psychology Bulletin, 30,* 106–117.

Malone, J. C., Liu, S. R., Vaillant, G. E., Rentz, D. M., & Waldinger, R. J. (2016). Midlife Eriksonian psychosocial development: Setting the stage for late-life cognitive and emotional health. *Developmental Psychology*, *52*(3), 496.

Manaster, G. (2006). *Adlerian lifestyle counseling* by W. Rule & M. Bishop [book review]. *PsycCritiques: APA Review of Books, 51*.

Manaster, G., & Mays, M. (2004). Early recollections: A conversation. *Journal of Individual Psychology, 60,* 107–114.

Mandal, F. B. (2018). Superstitions: A culturally transmitted human behavior. *International Journal of Psychology and Behavioral Sciences*, *8*(4), 65–69.

Mandal, S. P., Arya, Y. K., & Pandey, R. (2017). Mindfulness, emotion regulation, and subjective well-being: Exploring the link. *SIS Journal of Projective Psychology & Mental Health*, *24*(1).

Manger, T., & Ekeland, O. (2000). On the relationship between locus of control, level of ability and gender. *Scandinavian Journal of Psychology, 41,* 225–229.

Mann, F. D., Patterson, M. W., Grotzinger, A. D., Kretsch, N., Tackett, J. L., Tucker-Drob, E. M., & Harden, K. P. (2016). Sensation seeking, peer deviance, and genetic influences on adolescent delinquency: Evidence for person-environment correlation and interaction. *Journal of Abnormal Psychology*, *125*(5), 679.

Manning, L. B. (2020). Birth order and marriage: Examining homogamy, gender, and remarriage. *The Journal of Individual Psychology, 76*(3), 231–244. https://doi.org/10.1353/jip.2020.0026

Manukyan, V. R., Golovey, L. A., & Strizhitskaya, O. Y. (2015). Formation of personality psychological maturity and adulthood crises. *Psychology in Russia: State of the Art*, *8*(2), 99–112.

Manuoğlu, E., & Öner-Özkan, B. (2022). Sarcastic and deviant trolling in Turkey: Associations with dark triad and aggression. *Social Media + Society, 8*(3), 20563051221126053.

Maranges, H. M., Chen, S. K., & Conway, P. (2022). Insecure and insensitive: Avoidant and anxious attachment predict less concern for others in sacrificial moral dilemmas. *Personality and Individual Differences*, *185*, 111274.

Maranges, H. M., Haddad, N., Psihogios, S., Timbs, C. L., Gobes, C. M., & Preston, T. J. (2023). Lower self-control is associated with more standard, reputation management, and maladaptive Facebook use. *Journal of Individual Differences*. Advance online publication. https://dx.doi.org/10.1027/1614-0001/a000397

Maranges, H. M., Hasty, C. R., Maner, J. K., & Conway, P. (2021). The behavioral ecology of moral dilemmas: Childhood unpredictability, but not harshness, predicts less deontological and utilitarian responding. *Journal of Personality and Social Psychology, 120*(6), 1696–1719. https://doi.org/10.1037/pspp0000368

Maranges, H. M., Hasty, C. R., Martinez, J. L., & Maner, J. K. (2022). Adaptive calibration in early development: Brief measures of perceived childhood harshness and unpredictability. *Adaptive Human Behavior and Physiology*, *8*(3), 313–343.

Maranges, H. M., Iannuccilli, M., Nieswandt, K., Hlobil, U., & Dunfield, K. A. (2023). Brilliance beliefs, not mindsets, explain inverse gender gaps in psychology and philosophy. *Sex Roles*. https://doi.org/10.1007/s11199-023-01406-5

Maranges, H. M., Iannuccilli, M., Nieswandt, K., Hlobil, U., & Dunfield, K. A. (2023). What determines feelings of belonging and majoring in an academic field? Isolating factors by comparing psychology and philosophy. *Current Research in Behavioral Sciences.* https://doi.org/10.1016/j.crbeha.2023.100097

Maranges, H. M., & Reynolds, T. A. (2020). Heritability of Personality. In B. J. Carducci (Editor-in-Chief) & C. S. Nave (Vol. Ed.), *The Wiley-Blackwell encyclopedia of personality and individual differences: Vol. I. Models and theories.* John Wiley & Sons.

Maranges, H. M., & Strickhouser, J. E. (2021). Does ecology or character matter? The contributions of childhood unpredictability, harshness, and temperament to life history strategies in adolescence. *Evolutionary Behavioral Sciences, 16*(4), 313–329.

Marcano, M., Michaels, D., & Pierce, J. (2014). *Fantasy proneness, perceived locus of control, and their association with generalized anxiety*. American Psychological Association Convention Presentation. http://psycnet.apa.org/psycextra/544492014-001.pdf

March, D. S., & Gaertner, L. (2022). Female advantage in threat avoidance manifests in threat reaction but not threat detection. *Behavioral & Brain Sciences, 45*.

March, D. S., Gaertner, L., & Olson, M. A. (2017). In harm's way: On preferential response to threatening stimuli. *Personality and Social Psychology Bulletin, 43*(11), 1519–1529. https://doi.org/10.1177/0146167217722558

March, D. S., Gaertner, L., & Olson, M. A. (2018). On the prioritized processing of threat in a dual implicit process model of evaluation. *Psychological Inquiry*, *29*(1), 1–13.

March, D. S., Gaertner, L., & Olson, M. A. (2022). On the automatic nature of threat: Physiological and evaluative reactions to survival-threats outside conscious perception. *Affective Science, 3*(1), 135–144.

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3,* 551–558.

Marcia, J. E. (1967). Ego identity status: Relationship to change in self-esteem, general maladjustment and authoritarianism. *Journal of Personality, 35,* 118–133.

Marcia, J. E. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 159–187). Wiley.

Marcia, J. E., & Friedman, M. L. (1970). Ego identity status in college women. *Journal of Personality, 38,* 249–263.

Marcinkowska, U. M., Lyons, M. T., & Helle, S. (2016). Women's reproductive success and the preference for Dark Triad in men's faces. *Evolution and Human Behavior*, *37*(4), 287–292. https://doi.org/10.1016/j.evolhumbehav.2016.01.004

Marcus, B., & Schütz, A. (2005). Who are the people reluctant to participate in research? Personality correlates of four different types of non-response as inferred from self-and observer ratings. *Journal of Personality*, *73*(4), 959–984.

Marcus-Newhall, A., Pedersen, W., Miller, N., & Carlson, M. (2000). Displaced aggression is alive and well: A meta-analytic review. *Journal of Personality and Social Psychology, 78,* 670–689.

Margolin, L. (2020). Rogerian psychotherapy and the problem of power: A Foucauldian interpretation. *Journal of Humanistic Psychology*, *60*(1), 130–143. https://doi.org/10.1177/0022167816687640

Marian, M. (2013). Implications of learned helplessness in social problems and physical health. *International Journal of Education and Psychology in the Community (IJEPC)*, *3*(2), 7–10.

Marie-Louise von Franz (1998). *New York Times*, March 23.

Mark, G., & Ganzach, Y. (2014). Personality and Internet usage: A large-scale representative study of young adults. *Computers in Human Behavior, 36,* 274–281.

Markel, H. (2011). *The anatomy of addiction: Sigmund Freud, William Halstead and the miracle drug cocaine.* New York: Vintage.

Marker, C., & Schneider, F. (2015). Further evidence for the validity of the Need Inventory of Sensation Seeking. *Personality and Individual Differences, 77,* 41–44.

Markovitch, N., Luyckx, K., Klimstra, T., Abramson, L., & Knafo-Noam, A. (2017). Identity exploration and commitment in early adolescence: Genetic and

environmental contributions. *Developmental Psychology*, *53*(11), 2092.

Markstrom, C., Li, X., Blackshire, S., & Wilfong, J. (2005). Ego strength development of adolescents involved in adult-sponsored structured activities. *Journal of Youth and Adolescence, 34,* 85–95.

Markstrom, C., & Marshall, S. (2007). The psychological inventory of ego strength: Examination of theory and psychometric properties. *Journal of Adolescence, 30,* 63–79.

Márquez-González, M., Romero-Moreno, R., Cabrera, I., Olmos, R., Pérez-Miguel, A., & Losada, A. (2020). Tailored versus manualized interventions for dementia caregivers: The functional analysis-guided modular intervention. *Psychology and Aging*, *35*(1), 41.

Marrero Quevedo, R., & Abella, M. (2011). Well-being and personality: Facet-level analysis. *Personality and Individual Differences, 50,* 206–211.

Marriott, Y., & Buchanan, T. (2014). The true self online: Personality correlates of preference for self-expression online, and observer ratings of personality online and offline. *Computers in Human Behavior, 323,* 171–177.

Marsh, H. W., Pekrun, R., Murayama, K., Arens, A. K., Parker, P. D., Guo, J., & Dicke, T. (2018). An integrated model of academic self-concept development: Academic self-concept, grades, test scores, and tracking over 6 years. *Developmental Psychology*, *54*(2), 263–280. https://doi.org/10.1037/dev0000393

Martin, C. M. (1999). A developmental perspective on gender effects and gender concepts. In W. B. Swann, Jr., J. H. Langlois, & L. A. Gilbert (Eds.), *Sexism and stereotypes in modern society* (pp. 45–73). American Psychological Association.

Martin, J. J., Malone, L. A., & Hilyer, J. C. (2011). Personality and mood in women's Paralympic basketball champions. *Journal of Clinical Sport Psychology*, *5*(3), 197–210.

Martin, N., & Jardine, R. (1986). Eysenck's contributions to behavior genetics. In S. Modgill & L. Modgill (Eds.), *Hans Eysenck: Consensus and controversy* (pp. 13–47). Falmer.

Martín-Fernández, M., Marco, M., Romo, M., & Moyano, M. (2021). Adaptation of the brief sensation seeking scale in Spanish young adults: Psychometric properties and validity evidence. *Current Psychology*, *40*, 2698–2706.

Martin-Krumm, C., Sarrazin, P., Peterson, C., & Famose, J. (2003). Explanatory style and resilience after sports failure. *Personality and Individual Differences, 35,* 1685–1695.

Martinez, J. L., Hasty, C., Morabito, D., Maranges, H. M., Schmidt, N. B., & Maner, J. K. (2022). Perceptions of childhood unpredictability, delay discounting, risk-taking, and adult externalizing behaviors: A life-history approach. *Development and Psychopathology*, *34*(2), 705–717.

Martinez, S. M., Frongillo, E. A., Leung, C., & Ritchie, L. (2020). No food for thought: Food insecurity is related to poor mental health and lower academic performance among students in California's public university system. *Journal of Health Psychology*, *25*(12), 1930–1939.

Maruta, T., Colligan, R., Malinchoc, M., & Offord, K. (2000). Optimists versus pessimists: Survival rate among medical patients over a 30-year period. *Mayo Clinic Proceedings, 75,* 140–143.

Marx, D. M., & Roman, J. S. (2002). Female role models: Protecting women's math test performance. *Personality and Social Psychology Bulletin*, *28*(9), 1183–1193.

Masland, L. C., & Lease, A. M. (2016). Characteristics of academically influential children: Achievement motivation and social status. *Social Psychology of Education*, *19*, 195–215.

Masling, J. M., Rabie, L., & Blondheim, S. H. (1967). Obesity, level of aspiration, and Rorschach and TAT measures of oral dependence. *Journal of Consulting Psychology, 31,* 233–239.

Maslow, A. H. (1957). A philosophy of psychology: The need for a mature science of human nature. *Main Currents in Modern Thought, 13,* 27–32.

Maslow, A. H. (1968). *Toward a psychology of being* (2nd ed.). Van Nostrand Reinhold.

Maslow, A. H. (1970a). Tribute to Alfred Adler. *Journal of Individual Psychology, 26,* 13.

Maslow, A. H. (1970b). *Motivation and personality* (2nd ed.). Harper & Row.

Maslow, A. H. (1971). *The farther reaches of human nature.* Viking Press.

Maslow, A. H. (1979). *The journals of A. H. Maslow.* R. J. Lowry (Ed.). Brooks/Cole.

Maslow, A. H. (1987). *Motivation and personality* (3rd ed.). Harper & Row.

Mason, W., & Suri, S. (2012). Conducting behavioral research on Amazon's Mechanical Turk. *Behavior Research Methods, 44,* 1–23.

Matalon, C., & Turliuc, M. N. (2022). Parental self-efficacy and satisfaction with parenting as mediators of the association between children's noncompliance and marital satisfaction. *Current Psychology*, 1–14.

Mathew, P., & Bhatewara, S. (2006). Personality differences and preferred styles of conflict management among managers. *Abhigyan* [Asian Journal of Management], *23*(4), 38–45.

Matz, S. C., Gladstone, J. J., & Stillwell, D. (2016). Money buys happiness when spending fits our personality. *Psychological Science, 27*(5), 715–725. https://doi.org/10.1177/0956797616635200

Maurer, M. M., & Daukantaitė, D. (2020). Revisiting the organismic valuing process theory of personal growth: A theoretical review of Rogers and its connection to positive psychology. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.01706

Mavioglu, R., Boomsma, D., & Bartels, M. (2015, February 1). Causes of individual differences in adolescent optimism: A study of Dutch twins and their siblings. *European Child & Adolescent Psychiatry*. http://www.ncbi.nlm.nih.gov/pubmed/25638288

Maxwell, C., Garner, J., & Skogan, W. (2011, June 29). Collective efficacy and criminal behavior in Chicago, 1995–2004. *US Department of Justice (DOJ), National Criminal Justice Reference Service, (NCJRS)*. https://www.ncjrs.gov/pdffiles1/nij/grants/235154.pdf

Mayes, R., & Horwitz, A. (2005). DSM-III and the revolution in the classification of mental illness. *Journal of the History of the Behavioral Sciences, 41,* 249–267.

Mazandarani, A., Aguilar-Valaje, M., & Donhoff, G. (2013). Content analysis of Iranian college students' dreams: Comparison with American data. *Dreaming, 23,* 163–174.

Mazzoni, G. A. L., Lombardo, P., Malvagia, S., & Loftus, E. (1999). Dream interpretations and false beliefs. *Professional Psychology, 30,* 45–50.

McAdams, D. P. (1994). Can personality change? Levels of stability and growth in personality across the life span. In T. F. Heatherton & J. L. Weinberger (Eds.), *Can personality change?* (pp. 299–313). American Psychological Association.

McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology, 5,* 100–122.

McAdams, D. P., & de St. Aubin, E. (1992). A theory of generativity and its assessment through self-report, behavior acts, and narrative themes in autobiography. *Journal of Personality and Social Psychology, 62,* 1003–1015.

McAdams, D. P., Diamond, A., de St. Aubin, E., & Mansfield, E. (1997). Stories of commitment: The psychosocial construction of generative lives. *Journal of Personality and Social Psychology, 72,* 678–694.

McAdams, D. P., Hart, H. M., & Maruna, S. (1998). The anatomy of generativity. In D. P. McAdams & E. de St. Aubin (Eds.), *Generativity and adult development* (pp. 7–43). American Psychological Association.

McAdams, D. P., & Olson, B. (2010). Personality development: Continuity and change over the life course. *Annual Review of Psychology, 61,* 517–542.

McAdams, D. P., Reynolds, J., Lewis, M., Patten, A. H., & Bowman, P. J. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narratives and their relation to psychosocial adaptation in midlife adults and in students. *Personality and Social Psychology Bulletin, 27,* 474–485.

McAdams, D. P., Ruetzel, K., & Foley, J. M. (1986). Complexity and generativity at midlife: Relations among social motives, ego development, and adults' plans for the future. *Journal of Personality and Social Psychology, 50,* 800–807.

McAdams, K., & Donnellan, M. (2009). Facets of personality and drinking in first-year college students. *Personality and Individual Differences, 46,* 207–212.

McAuliffe, K., Jordan, J. J., & Warneken, F. (2015). Costly third-party punishment in young children. *Cognition*, *134*, 1–10.

McCabe, K. O., & Fleeson, W. (2016). Are traits useful? Explaining trait manifestations as tools in the pursuit of goals. *Journal of Personality and Social Psychology, 110*(2), 287–301. https://doi.org/10.1037/a0039490

McCabe, K. O., Lubinski, D., & Benbow, C. P. (2020). Who shines most among the brightest?: A 25-year longitudinal study of elite STEM graduate students. *Journal of Personality and Social Psychology*, *119*(2), 390.

McCann, S., Stewin, L., & Short, R. (1990). Frightening dream frequency and birth order. *Individual Psychology, 46,* 304–310.

McCarthy, T. (2014). Great aspirations: The postwar American college counseling center. *History of Psychology, 17,* 1–18.

McCarty, D. L., & Popejoy, E. K. (2021). Social interest and the purposive nature of tattoos. *The Journal of Individual Psychology, 77*(4), 461–475. https://doi.org/10.1353/jip.2021.0030

McCauley, T. G., & McCullough, M. E. (2022). Retrospective self-reported childhood experiences in enriched environments uniquely predict prosocial behavior and personality traits in adulthood. *Evolutionary Psychology, 20*(3), 14747049221110603.

McClelland, S. (2014). "What do you mean when you say that you are sexually satisfied?" A mixed methods study. *Feminism & Psychology, 24,* 74–96.

McCoy, H., & Bowen, E. (2014, August 22). Hope in the social environment: Factors affecting future aspiratons and school self-efficacy for youth in urban environments. *Child & Adolescent Social Work Journal.* http://link.springer.com/article/ 10.1007/s10560-014-0343-7#page-1

McCoy, T. (2014, December 11). "Learned helplessness": The chilling psychological concept behind the CIA's interrogation methods. *Washington Post*. http://www.washingtonpost.com/ news/morning-mix/wp/2014/12/11/the-chilling-psychological-principle-behind-the-cias-interrogation-methods/

McCrae, R. (2011). Personality theories for the 21st century. *Teaching of Psychology, 38,* 209–214.

McCrae, R. R., & Costa, P. T., Jr. (1985a). Openness to experience. In R. Hogan & W. H. Jones (Eds.), *Perspectives in personality* (Vol. 1, pp. 145–172).

McCrae, R. R., & Costa, P. T., Jr. (1985b). Updating Norman's "adequate taxonomy": Intelligence and personality dimensions in natural language and questionnaires. *Journal of Personality and Social Psychology, 49(3),* 710–721.

McCrae, R. R., & Costa, P. T., Jr. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology, 52,* 81–90.

McCrae, R. R., & Costa, P. T., Jr. (1989). Reinterpreting the Myers-Briggs Type Indicator from the perspective of the five-factor model of personality. *Journal of Personality, 57,* 17–40.

McCrae, R. R., & Costa, P. T., Jr. (1991). Adding *Liebe* und *Arbeit*: The full five-factor model and well-being. *Personality and Social Psychology Bulletin, 17,* 227–232.

McCrae, R. R., & Costa, P. T., Jr. (1997). Personality trait structure as a human universal. *American Psychologist, 52,* 509–516.

McCrae, R. R., Costa, P. T., Jr., Hrebickova, M., Urbanek, T., Martin, T., Oryol, V., Rukavishnikov, A. A., & Senin,

I. G. (2004a). Age differences in personality traits across cultures: Self-report and observer perspectives. *European Journal of Personality, 18,* 143–157.

McCrae, R. R., Costa, P. T., Jr., Martin, T., Oryol, V., Rukavishnikov, A., Senin, I., Hřebíčková, M., & Urbánek, T. (2004b). Consensual validation of personality traits across cultures. *Journal of Research in Personality, 38,* 179–201.

McCrae, R. R., Costa, P. T., Jr., Pedroso de Lima, M., Simões, A., Ostendorf, F., Angleitner, A., Marusić, I., Bratko, D., Caprara, G. V., Barbaranelli, C., Chae, J. H., & Piedmont, R. L. (1999). Age differences in personality across the adult life span: Parallels in five cultures. *Developmental Psychology, 35,* 466–477.

McCrae, R. R., Costa, P. T., Jr., Terracciano, A., Parker, W. D., Mills, C. J., De Fruyt, F., Mervielde, I. (2002). Personality trait development from age 12 to age 18: Longitudinal, cross-sectional, and cross-cultural analyses. *Journal of Personality and Social Psychology, 83,* 1456–1468.

McCrae, R. R., & Terracciano, A. (2005). Universal features of personality traits from the observer's perspective: Data from 50 cultures. *Journal of Personality and Social Psychology, 88,* 547–561.

McCrae, R. R., Yi, M. S. M., Trapnell, P. D., Bond, M. H., & Paulhus, D. L. (1998). Interpreting personality profiles across cultures: Bilingual, acculturation, and peer rating studies of Chinese undergraduates. *Journal of Personality and Social Psychology, 74,* 1041–1055.

McCullough, M. (2001). Freud's seduction theory and its rehabilitation: A saga of one mistake after another. *Review of General Psychology, 5,* 3–22.

McCullough, M. E., Pedersen, E. J., Schroder, J. M., Tabak, B. A., & Carver, C. S. (2013). Harsh childhood environmental characteristics predict exploitation and retaliation in humans. *Proceedings of the Royal Society B: Biological Sciences, 280*(1750), 20122104.

McDaniel, M., Beier, M., Perkins, A., Goggins, S., & Frankel, B. (2009). An assessment of the fakeability of self-report and implicit personality measures. *Journal of Research in Personality, 43,* 682–685.

McGuigan, N. (2013). The influence of model status on the tendency of young children to over-imitate. *Journal of Experimental Child Psychology*, *116*(4), 962–969.

McHale, S., Updegraff, K., Helms-Erikson, H., & Crouter, A. (2001). Sibling influences on gender development in middle childhood and early adolescence: A longitudinal study. *Developmental Psychology, 37,* 115–125.

McIntyre, L. L., & Golya, N. (2016). Assessment of behavior problems and the use of functional behavioral assessment during early childhood. *Early Childhood Assessment in School and Clinical Child Psychology*, 119–138.

McKay, T., & Walker, B. R. (2021). Mindfulness, self-compassion and wellbeing. *Personality and Individual Differences*, *168*, 110412. https://doi.org/10.1016/j.paid.2020.110412

McLaughlin, N. G. (1998). Why do schools of thought fail? Neo-Freudianism as a case study in the sociology of knowledge. *Journal of the History of the Behavioral Sciences, 34,* 113–134.

McMichael, S. L., Bixter, M. T., Okun, M. A., Bunker, C. J., Graudejus, O., Grimm, K. J., & Kwan, V. S. (2022). Is seeing believing? A longitudinal study of vividness of the future and its effects on academic self-efficacy and success in college. *Personality and Social Psychology Bulletin*, *48*(3), 478–492.

McNally, B., & Bradley, G. (2014). Driving construals: Personal construct theory in a reckless driving context. *Transportation Research Part F: Traffic Psychology and Behavior, 24,* 71–82.

McNally, R., Clancy, S., Schacter, D., & Pitman, R. (2000). Personality profiles, dissociation, and absorption in women reporting repressed, recovered, or continuous memories of childhood sexual abuse. *Journal of Consulting and Clinical Psychology, 68,* 1033–1037.

McNally, R., Perlman, C., Ristuccia, C., & Clancy, S. (2006). Clinical characteristics of adults reporting repressed, recovered, or continuous memories of childhood sexual abuse. *Journal of Consulting and Clinical Psychology, 74,* 237–242.

McNamara, J. R., & Andrasik, F. (2013). Behavioral intervention in industry and government. In L. Michelson, M. Hersen, & S. M. Turner (Eds.), *Future perspectives in behavior therapy* (pp. 315–334). Springer Science & Business Media. http://doi.org/10.1007/978-1-4613-3243-5

McNiel, J. M., & Fleeson, W. (2006). The causal effects of extraversion on positive affect and neuroticism on negative affect: Manipulating state extraversion and state neuroticism in an experimental approach. *Journal of Research in Personality*, *40*(5), 529–550.

Mealey, L. (1995). The sociobiology of sociopathy: An integrated evolutionary model. *Behavioral and Brain Sciences, 18*(3), 523–541.

Međedović, J., Šoljaga, M., Stojković, A., & Gojević, I. (2018). Revealing complex relations between personality and fitness: HEXACO personality traits, life-time reproductive success and the age at first birth. *Personality and Individual Differences*, *129*, 143–148. https://doi.org/10.1016/j.paid.2018.03.014

Medinnus, G., & Curtis, F. (1963). The relation between maternal self-acceptance and child acceptance. *Journal of Counseling Psychology, 27,* 542–544.

Megreya, A. M., & Bindemann, M. (2013). Individual differences in personality and face identification. *Journal of Cognitive Psychology*, *25*(1), 30–37.

Mehdizadeh, S. (2010). Self-presentation 2.0: Narcissism and self-esteem on Facebook. *Cyberpsychology, Behavior, and Social Networking, 13,* 357–364.

Meier, B., Robinson, M., Carter, M., & Hinsz, V. (2010). Are social people more beautiful? A zero-sum acquaintance analysis of agreeableness, extraversion, and attractiveness. *Journal of Research in Personality, 44,* 283–296.

Mellor, S. (1990). How do only children differ from other children? *Journal of Genetic Psychology, 151,* 221–230.

Merling, L. F., Siev, J., Delucia, C., & Davidtz, J. (2022). I think I can: The role of self-efficacy in exposure to contamination. *Journal of Social and Clinical Psychology*, *41*(5), 423–443.

Merton, R. (1957). *Social theory and social structure*, revised edn. Free Press.

Meuss, W. (2011). The study of adolescent identity formation 2000–2010: A review of longitudinal research. *Journal of Research on Adolescence, 21,* 75–94.

Meyer, O., Zane, N., Cho, Y., & Takeuchi, D. (2009). Use of specialty mental health services by Asian Americans with psychiatric disorders. *Journal of Consulting and Clinical Psychology, 77*(5), 1000–1005.

Michikyan, M., Subrahmanyam, K., & Dennis, J. (2014). Can you tell who I am? Neuroticism, extraversion, and online self-presentation among young adults. *Computers in Human Behavior, 33,* 179–183.

Migone, M. (2013). Psychoanalysis on the Internet: A discussion of its theoretical implications for both online and offline therapeutic technique. *Psychoanalytic Psychology, 30,* 281–299.

Mikulincer, M., & Shaver, P. R. (2003). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. *Advances in Experimental Social Psychology, 35*, 56–152.

Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. Guilford Press.

Milam, A. J., Furr-Holden, D., Edwards-Johnson, J., Webb, B., Patton III, J. W., Ezekwemba, N. C., Porter, L., Davis, T., Chukwurah, M., Webb, A. J., Simon, K., Franck, G., Anthony, J., Onuoha, G., Brown, I. M., Carson, J. T., & Stephens, B. C. (2020). Are clinicians contributing to excess African American COVID-19 deaths? Unbeknownst to them, they may be. *Health Equity*, *4*(1), 139–141.

Miletic, M. P. (2002). The introduction of a feminine psychology to psychoanalysis: Karen Horney's legacy. *Contemporary Psychoanalysis, 38*(2), 287–299.

Milfont, T. L., Milojev, P., & Sibley, C. G. (2016). Values stability and change in adulthood: A 3-year longitudinal study of rank-order stability and mean-level differences. *Personality and Social Psychology Bulletin*, *42*(5), 572–588.

Miller, A. K., Hensman, M. C., Hensman, S., Schultz, K., Reid, P., Shore, M., Brown, J., Furton, K. G., & Lee, S. (2015). African elephants (*Loxodonta africana*) can detect TNT using olfaction: Implications for biosensor application. *Applied Animal Behaviour Science*, *171*, 177–183.

Miller, K. J., Mesagno, C., McLaren, S., Grace, F., Yates, M., & Gomez, R. (2019). Exercise, mood, self-efficacy, and social support as predictors of depressive symptoms in older adults: Direct and interaction effects. *Frontiers in Psychology*, *10*, 2145.

Milosevic-Dordevic, J., & Zezilj, I. (2013). Psychological predictors of addictive social networking site use: The case of Serbia. *Computers in Human Behavior, 32,* 229–234.

Milot, T., Plamondon, A., Ethier, L., Lemelin, J., St-Laurent, D., & Rousseau, M. (2013). Validity of CBCL-derived PTSD and dissociation scales: Further evidence in a sample of neglected children and adolescents. *Child Maltreatment, 18,* 122–128.

Milton, J. (2002). *The road to malpsychia: Humanistic psychology and our discontents*. Encounter Books.

Milyavskaya, M., & Koestner, R. (2011). Psychological needs, motivation, and well-being: A test of self-determination theory across multiple domains. *Personality and Individual Differences, 50,* 397–391.

Mindess, H. (1988). *Makers of psychology: The personal factor.* New York: Human Sciences Press.

Minkov, M. (2009). Predictors of differences in subjective wellbeing across 97 nations. *Cross-Cultural Research, 43,* 162–179.

Miranda, A. O., Frevert, E. S., & Kern, R. M. (1998). Lifestyle differences between bicultural and low- and high-acculturation level Latino adults. *Individual Psychology, 54,* 119–134.

Mirowsky, J., & Ross, C. E. (2007). Life course trajectories of perceived control and their relationship to education. *American Journal of Sociology*, *112*(5), 1339–1382.

Mischel, W. (1968). *Personality and assessment*. Wiley.

Mischel, W. (1973). Toward a cognitive social-learning reconceptualization of personality. *Psychological Review, 80,* 252–283.

Mishali, M., Omer, H., & Heymann, A. (2011). The importance of measuring self-efficacy in patients with diabetes. *Family Practice, 28,* 82–87.

Mishra, M., & Sahoo, P. (2018). A study on perception of social media and academic performance of adolescents: Role of gender and locus of control. *IAHRW International Journal of Social Sciences Review, 6*(5), 778–781.

Mistry, H. (2015). Music while you work: The effects of background music on test performance amongst extroverts and introverts. *Journal of Applied Psychology and Social Science*, *1*(1), 1–14.

Mitchell, L. L., Lodi-Smith, J., Baranski, E. N., & Whitbourne, S. K. (2021). Implications of identity resolution in emerging adulthood for intimacy, generativity, and integrity across the adult lifespan. *Psychology and Aging*, *36*(5), 545.

Mitchell, S. A., & Black, M. J. (2016). *Freud and beyond: A history of modern psychoanalytic thought*. Hachette UK.

Mittal, C., & Griskevicius, V. (2014). Sense of control under uncertainty depends on people's childhood environment: A life history theory approach. *Journal of Personality and Social Psychology, 107*(4), 621.

Mittal, C., Griskevicius, V., & Haws, K. L. (2020). From cradle to grave: How childhood and current environments impact consumers' subjective life expectancy and decision-making. *Journal of Consumer Research*, *47*(3), 350–372.

Mittal, C., Griskevicius, V., Simpson, J. A., Sung, S., & Young, E. S. (2015). Cognitive adaptations to stressful environments: When childhood adversity enhances adult executive function. *Journal of Personality and*

Social Psychology, 109, 604–621. http://dx.doi.org /10.1037/ pspi0000028

Mizuno, M. (2022). My Adlerian experiences: My mentor and ICASSI. *The Journal of Individual Psychology, 78*(1), 104–111. https://doi.org/10.1353/jip.2022.0014

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., Houts, R., Poulton, R., Roberts, B. W., Ross, S., Sears, M. R., Thomson, W. M., & Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences*, *108*(7), 2693–2698.

Mogilner, C. (2010). The pursuit of happiness: Time, money, and social connection. *Psychological Science, 21,* 1348–1354.

Mogilski, J. K., Vrabel, J., Mitchell, V. E., & Welling, L. L. (2019). The primacy of trust within romantic relationships: Evidence from conjoint analysis of HEXACO-derived personality profiles. *Evolution and Human Behavior*, *40*(4), 365–374.

Mohammadi, A. (2013). Relationship between family environment and parenting styles with identity status. *International Family Therapy Association's 21st World Family Therapy Congress,* Orlando, Florida. http:// psycnet.apa.org/doi/ 10.1037/e635102013-119

Moksnes, U., Moljord, I., Espnes, G., & Byrne, D. (2010). The association between stress and emotional states in adolescents: The role of gender and self-esteem. *Personality and Individual Differences, 49*(5)*,* 430–435.

Molander, O., Ramnerö, J., Bjureberg, J., & Berman, A. H. (2022). What to target in cognitive behavioral treatment for gambling disorder—A qualitative study of clinically relevant behaviors. *BMC Psychiatry*, *22*(1), 1–13.

Momeni, K., Davarinejad, O., Shahi, H., & Janjani, P. (2017). The impact of personality of stagnation and generativity on lifestyle: An empirical view to Erikson's developmental psychology theory in lifespan psychology. *Journal of Psychological Studies*, *12*(4), 25–48.

Montag, C., Jurkiewicz, M., & Reuter, M. (2010). Low self-directness is a better predictor for problematic Internet use than high neuroticism. *Computers in Human Behavior, 26,* 1531–1535.

Montag, C., & Panksepp, J. (2017). Primary emotional systems and personality: An evolutionary perspective. *Frontiers in Psychology*, *8*, 464.

Montiglio, P. O., Ferrari, C., & Reale, D. (2013). Social niche specialization under constraints: Personality, social interactions and environmental heterogeneity. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *368*(1618), 20120343.

Moolenaar, N. M., Sleegers, P. J., & Daly, A. J. (2012). Teaming up: Linking collaboration networks, collective efficacy, and student achievement. *Teaching and Teacher Education, 28*(2), 251–262.

Moore, C., & Tenbrunsel, A. E. (2014). "Just think about it"? Cognitive complexity and moral choice. *Organizational Behavior and Human Decision Processes*, *123*(2), 138–149.

Moradi, B., van den Berg, J. J., & Epting, F. R. (2009). Threat and guilt aspects of internalized antilesbian and gay prejudice: An application of personal construct theory. *Journal of Counseling Psychology*, *56*(1), 119–131.

Morbach, A. C. B., & Pedroso, J. D. S. (2022). Aspects of the development of older adults in the perspective of analytical psychology: A systematic review of qualitative findings. *Aging & Mental Health*, *26*(1), 1–12.

Morehouse, R. E., Farley, F., & Youngquist, J. V. (1990). Type T personality and the Jungian classification system. *Journal of Personality Assessment, 54,* 231–235.

Morewedge, C., & Norton, M. (2009). When dreaming is believing: The (motivated) interpretation of dreams. *Journal of Personality and Social Psychology, 96,* 249–264.

Morgan, C. D., & Murray, H. A. (1935). A method for investigating fantasies. *Archives of Neurology and Psychiatry, 34,* 289–306.

Morgenroth, T., Ryan, M. K., & Peters, K. (2015). The motivational theory of role modeling: How role models influence role aspirants' goals. *Review of General Psychology*, *19*(4), 465–483.

Morling, B., Kitayama, S., & Miyamoto, Y. (2002). Cultural practices emphasize influence in the United States and adjustment in Japan. *Personality and Social Psychology Bulletin, 28,* 311–323.

Morris, A. S., Criss, M. M., Silk, J. S., & Houltberg, B. J. (2017). The impact of parenting on emotion regulation during childhood and adolescence. *Child Development Perspectives*, *11*, 233–238.

Morris, P. H., & Warne, A. (2017). Personality affects "fidgeting" in the laboratory: Implications for experimental design. *Personality and Individual Differences*, *118*, 7–10. https://doi.org/10.1016/j .paid.2017.04.023

Mosavel, M., Ahmed, R., Ports, K. A., & Simon, C. (2015). South African, urban youth narratives: Resilience within community. *International Journal of Adolescence and Youth*, *20*(2), 245–255.

Mosher, D. (2011, June 17). High wired: Does addictive Internet use restructure the brain? *Scientific American*. http://www.scientificamerican.com/article /does-addictive-Internet-use-restructure-brain/

Moskowitz, D. S., & Schwartzman, A. E. (1989). Life paths of aggressive and withdrawn children. In D. M. Buss & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 99–114). Springer-Verlag.

Mostowik, J., Cyranka, K., Mielimąka, M., Ostrowski, T. M., & Rutkowski, K. (2018). The intensity of anxiety, neurotic symptoms and perceived control among patients with neurotic and personality disorders. *Archives of Psychiatry and Psychotherapy*, *20*(1), 33–44. https://doi.org/10.12740/APP/80756

Mostowik, J., Mielimąka, M., Rutkowski, K., & Ostrowski, T. (2022). Time in the mental health context: Neurotic symptomatology, defense mechanisms and the perception of time perspective among patients

diagnosed with neurotic and personality disorders—A clinical study. *Psychological Reports*, *125*(1), 232–255. https://doi.org/10.1177/0033294120978164

Motley, M. T. (1985). The production of verbal slips and double entendres as clues to the efficiency of normal speech production. *Journal of Language and Social Psychology,* 4(3–4), 275–293.

Mõttus, R., Kandler, C., Bleidorn, W., Riemann, R., & McCrae, R. R. (2017). Personality traits below facets: The consensual validity, longitudinal stability, heritability, and utility of personality nuances. *Journal of Personality and Social Psychology, 112*(3), 474.

Moussa, N. M., & Ali, W. F. (2022). Exploring the relationship between students' academic success and happiness levels in the higher education settings during the lockdown period of COVID-19. *Psychological Reports*, *125*(2), 986–1010. https://doi.org/10.1177/0033294121994568

Mroczek, D., & Almeida, D. (2004). The effect of daily stress, personality, and age on daily negative affect. *Journal of Personality, 72,* 355–378.

Mujcic, R., & Oswald, A. J. (2016). Evolution of well-being and happiness after increases in consumption of fruit and vegetables. *American Journal of Public Health, 106*(8), 1504–1510. https://doi.org/10.2105/AJPH.2016.303260

Mülazım, Ö. Ç., & Eldeleklioğlu, J. (2016). What is the role of self-compassion on subjective happiness and life satisfaction? *Journal of Human Sciences*, *13*(3), 3895–3904.

Mullen, N. W., Maxwell, H., & Bedard, M. (2015). Decreasing driver speeding with feedback and a token economy. *Transportation Research Part F: Traffic Psychology and Behaviour*, *28*, 77–85.

Muller, K., Beutel, M., Egloff, B., & Wolfling, K. (2014). Investigating risk factors for Internet gaming disorder: A comparison of patients with addictive gaming, pathological gamblers and healthy controls regarding the Big Five personality traits. *European Addiction Research, 20,* 129–136.

Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology, 38,* 30–38.

Muñoz, M. E., & De Los Reyes, S. (2021). The Dark Triad and honesty rules in romantic relationships. *Current Psychology*, 1–3.

Munsey, C. (2010). Does marriage make us happy? *Monitor on Psychology, 41*(9), 20–21.

Murch, W. S., & Clark, L. (2016). Games in the brain: Neural substrates of gambling addiction. *The Neuroscientist*, *22*(5), 534–545.

Murdock, N. (2008). Carl Rogers lives: Person-centered theory in the United Kingdom. [Review of the book *Humanizing psychiatry and mental health care: The challenge of the person-centered approach.* Radcliffe Publishing Co. 2007]. *PsycCRITIQUES, 53*(8), Article 11.

Muris, P. (2002). Relationships between self-efficacy and symptoms of anxiety disorders and depression in a normal adolescent sample. *Personality and Individual Differences, 32,* 337–348.

Muris, P., & Meesters, C. (2014). Small or big in the eyes of the other: On the developmental psychopathology of self-conscious emotions as shame, guilt, and pride. *Clinical Child and Family Psychology Review*, *17*, 19–40.

Muris, P., Meesters, C., & Timmermans, A. (2013). Some youths have a gloomy side: Correlates of the Dark Triad personality traits in non-clinical adolescents. *Child Psychiatry and Human Development, 44,* 658–665.

Murphy, D., Joseph, S., Demetriou, E., & Karimi-Mofrad, P. (2017). Unconditional positive self-regard, intrinsic aspirations, and authenticity: Pathways to psychological well-being. *Journal of Humanistic Psychology*, *60*(2), 258–279. https://doi.org/10.1177/0022167816688314

Murphy, N. A., Hall, J. A., Ruben, M. A., Frauendorfer, D., Schmid Mast, M., Johnson, K. E., & Nguyen, L. (2019). Predictive validity of thin-slice nonverbal behavior from social interactions. *Personality and Social Psychology Bulletin*, *45*(7), 983–993.

Murray, K. M., & Johnson, W. B. (2001). Personality type and success among female naval academy midshipmen. *Military Medicine, 166,* 889–893.

Muusses, L., Finkenauer, C., Kerkhof, P., & Billedo, C. (2014). A longitudinal study of the association between compulsive Internet use and well-being. *Computers in Human Behavior, 36,* 21–28.

Myers, L., & Derakshan, N. (2004). Do childhood memories colour social judgements of today? The case of repressors. *European Journal of Personality, 18,* 321–330.

Naffi, N., & Davidson, A. L. (2016). Examining the integration and inclusion of Syrian refugees through the lens of personal construct psychology. *Personal Construct Theory and Practice*, *13*, 200–9.

Naik, A. R., & Sundaramoorthy, J. (2016). The relationship between locus of control and depression among college students of Gulbarga City. *Indian Journal of Positive Psychology, 7*(2), 249–255.

Nakamura, M. (2002). Relationship between anxiety and physical traits of facial expression. *Japanese Journal of Psychology, 73,* 140–147.

Nasello, J., Triffaux, J. M., & Hansenne, M. (2023). Individual differences and personality traits across situations. *Current Issues in Personality Psychology*.

Nasser, R., & Abouchedid, K. (2006). Locus of control and attribution for poverty: Comparing Lebanese and South African university students. *Social Behavior and Personality, 34,* 777–796.

Natvik, E., Råheim, M., Andersen, J. R., & Moltu, C. (2019). An experientially derived model of flexible and intentional actions for weight loss maintenance after severe obesity. *Frontiers in Psychology*, *10*, 2503.

Naus, M., Philipp, L., & Samsi, M. (2009). From paper to pixels: A comparison of paper and computer formats in psychological assessment. *Computers in Human Behavior, 25,* 1–7.

Nave, C. S., Sherman, R. A., Funder, D. C., Hampson, S. E., & Goldberg, L. R. (2010). On the contextual independence of personality: Teachers' assessments predict directly observed behavior after four decades. *Social Psychological and Personality Science, 1*(4), 327–334.

Nazir, M., & Rafique, R. (2019). Empathy, styles of humor and social competence in university students. *Pakistan Journal of Social and Clinical Psychology*, *17*(1), 47–54.

Nebbitt, V. (2009). Self-efficacy in African American adolescent males living in urban public housing. *Journal of Black Psychology, 35,* 295–316.

Negru-Subtirica, O., Pop, E. I., Luyckx, K., Dezutter, J., & Steger, M. F. (2016). The meaningful identity: A longitudinal look at the interplay between identity and meaning in life in adolescence. *Developmental Psychology*, *52*(11), 1926.

Neimeyer, G. J. (1984). Cognitive complexity and marital satisfaction. *Journal of Social and Clinical Psychology, 2,* 258–263.

Nes, L. S., & Segerstrom, S. C. (2006). Dispositional optimism and coping: A meta-analytic review. *Personality and Social Psychology Review*, *10*(3), 235–251.

Nettle, D. (2006). The evolution of personality variation in humans and other animals. *American Psychologist*, *61*, 622–631.

Netz, Y., Wu, M., Becker, B., & Tenenbaum, G. (2005). Physical activity and psychological well-being in advanced age: A meta-analysis of intervention studies. *Psychology and Aging, 20,* 272–284.

Newbauer, J., & Stone, M. (2010). Social interest and self-reported distress in a delinquent sample: Application of the SSSI and the MAYSI-2. *Journal of Individual Psychology, 66,* 201–215.

Newman, L. S., Duff, K. J., & Baumeister, R. F. (1997). A new look at defensive projection: Thought suppression, accessibility, and biased person perception. *Journal of Personality and Social Psychology, 72,* 980–1001.

Newman, L. S., Higgins, E. T., & Vookles, J. (1992). Self-guide strength and emotional vulnerability: Birth order as a moderator of self-affect relations. *Personality and Social Psychology Bulletin, 18,* 402–411.

Newman, L. S., & McKinney, L. C. (2002). Repressive coping and threat-avoidance: An idiographic Stroop study. *Personality and Social Psychology Bulletin, 28,* 409–422.

Nezami, E., Zamani, R., & DeFrank, G. (2008). Linguistic translation of psychological assessment tools. *Evaluation and the Health Professions, 31*(3), 313–317.

Nezlek, J., Kowalski, R. M., Leary, M. R., Blevins, T., & Holgate, S. (1997). Personality moderators of reactions to interpersonal rejection: Depression and trait self-esteem. *Personality and Social Psychology Bulletin, 23,* 1235–1244.

Nghe, L., & Mahalik, J. (2001). Examining racial identity statuses as predictors of psychological defenses in African American college students. *Journal of Counseling Psychology, 48,* 10–16.

Nicholson, I. A. M. (2003). *Inventing personality: Gordon Allport and the science of selfhood*. American Psychological Association.

Niedenthal, P., Mermillod, M., Maringer, M., & Hess, U. (2010). The simulation of smiles (SIMS) model: Embodied simulation and the meaning of facial expression. *Behavioral and Brain Sciences, 33,* 417–433.

Nielsen, M., Moore, C., & Mohamedally, J. (2012). Young children overimitate in third-party contexts. *Journal of Experimental Child Psychology, 112*(1), 73–83. https://doi.org/10.1016/j.jecp.2012.01.001

Nielsen, S. G., Johansen, G. G., & Jørgensen, H. (2018). Peer learning in instrumental practicing. *Frontiers in Psychology*, *9*, 339.

Nigel, S. M., Dudeck, M., Otte, S., Knauer, K., Klein, V., Böttcher, T., Maaß, C., Vesic, N., & Streb, J. (2018). Psychopathy, the Big Five and empathy as predictors of violence in a forensic sample of substance abusers. *The Journal of Forensic Psychiatry & Psychology*, *29*(6), 882–900.

Nikelly, A. (2005). Positive health outcomes of social interest. *Journal of Individual Psychology, 61,* 329–342.

Nishimura, T., & Suzuki, T. (2016). Aspirations and life satisfaction in Japan: The Big Five Personality makes clear. *Personality and Individual Differences*, *97*, 300–305. https://doi.org/10.1016/j.paid.2016.02.070

Njau, A. N., & Othuon, L. (2022). Gender and age differences in the relationship between sensation-seeking and sexual risk-taking behavior among adolescents. *De Economist, 169,* 5–20.

Noël, N. M., Trocchia, P., & Luckett, M. (2016). A predictive psychometric model to identify personality and gender differences of college majors. *The International Journal of Management Education*, *14*(3), 240–247.

Nolan, G. (2008). Teacher communication of unconditional positive regard (love) to students in secondary school environments. *Dissertation Abstracts International. Section A: Humanities and Social Sciences, 4978.*

Noll, R. (1993). Personal communication.

Noll, R. (1994). *The Jung cult: Origins of a charismatic movement*. Princeton University Press.

Noll, R. (1997). *The Aryan Christ: The secret life of Carl Jung.* Random House.

Noltemeyer, A., Bush, K., Patton, J., & Bergen, D. (2012). The relationship among deficiency needs and growth needs: An empirical investigation of Maslow's theory. *Children and Youth Services Review, 34,* 1862–1867.

Norcross J. C. (2011). *Psychotherapy relationships that work: Evidence-based responsiveness* (2nd ed.). Oxford University Press.

Norcross J. C., & Lambert M. J. (2011). Introduction. In Norcross J. C. (Ed.), *Psychotherapy relationships that work: Evidence-based responsiveness* (2nd ed., pp. 1–3). Oxford University Press.

Nordahl, K. B., Zambrana, I. M., & Forgatch, M. S. (2016). Risk and protective factors related to fathers' positive involvement and negative reinforcement with 1-year-olds. *Parenting*, *16*(1), 1–21.

Norenzayan, A., & Lee, A. (2010). It was meant to happen: Explaining cultural variations in fate attributions. *Journal of Personality and Social Psychology, 98*(5), 702–720.

Nowicki, S., & Duke, M. P. (1983). The Nowicki-Strickland lifespan locus of control scales: Construct validation. In H. M. Lefcourt (Ed.), *Research with the locus of control construct* (Vol. 2, pp. 13–51). Academic Press.

Nowicki, S., Gregory, S., Iles-Caven, Y., Ellis, G., & Golding, J. (2018). Early home-life antecedents of children's locus of control. *Frontiers in Psychology*, *9*, 2032. https://doi.org/10.3389/fpsyg.2018.02032

Nowicki, S., Iles-Caven, Y., Gregory, S., Ellis, G., & Golding, J. (2017). The impact of prenatal parental locus of control on children's psychological outcomes in infancy and early childhood: A prospective 5-year study. *Frontiers in Psychology*, *8*, 546. https://doi.org/10.3389/fpsyg.2017.00546

Nowicki, S., & Strickland, B. R. (1973). A locus of control scale for children. *Journal of Consulting Psychology, 40,* 148–154.

Nusser, L., Zimprich, D., & Wolf, T. (2022, October 8). Themes of trust, identity, intimacy, and generativity in important autobiographical memories: Associations with life periods and life satisfaction. *Journal of Personality*. https://doi.org/10.1111/jopy.12786

Oaten, M., & Cheng, K. (2006). Improved self-control: The benefits of a regular program of academic study. *Basic and Applied Social Psychology*, *28*(1), 1–16.

Oates, J. (2012). Learning from watching. In B. Nicola & J. Byford (Eds.), *Investigating psychology: Key concepts, key studies, key approaches* (pp. 100–138). Oxford University Press.

Oberst, U., & Checa, I. (2022). A contribution to the theory and measurement of Adlerian personality priorities. *The Journal of Individual Psychology, 78*(2), 257–277. https://doi.org/10.1353/jip.2022.0028

Obrenovic, B., Du, J., Godinic, D., Baslom, M. M., & Tsoy, D. (2021). The threat of Covid-19 and job insecurity impact on depression and anxiety: An empirical study in the USA. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.648572

Office of the Administration for Children and Families (2021). https://www.acf.hhs.gov/acf-data-research

Ofshe, R., & Watters, E. (1994). *False memories, psychotherapy, and sexual hysteria.* New York: Scribner's.

Ogasahara, K., Hirono, M., & Kato, S. (2013). Support for on-task behavior through a token economy system: Autistic youth who shows challenging behavior. *Japanese Journal of Special Education, 51,* 41–49.

Oishi Lab. (2023). Oishi Lab. University of Chicago. https://voices.uchicago.edu/oishilab/events/

Oishi, S., Choi, H., Buttrick, N., Heintzelman, S. J., Kushlev, K., Westgate, E. C., Tucker, J., Ebersole, C. R., Axt, J., Gilbert, E., Ng, B. W., Department of Psychology, University of Virginia, & Besser, L. L. (2019). The psychologically rich life questionnaire. *Journal of Research in Personality*, *81*, 257–270.

Oishi, S., Choi, H., Koo, M., Galinha, I., Ishii, K., Komiya, A., Luhmann, M., Scollon, C., Shin, J., Lee, H., Suh, E. M., Vittersø, J., Heintzelman, S. J., Kushlev, K., Westgate, E. C., Buttrick, N., Tucker, J., Ebersole, C. R., Axt, J., . . . Besser, L. L. (2020). Happiness, meaning, and psychological richness. *Affective Science*, *1*, 107–115.

Oishi, S., & Diener, E. (2001). Goals, culture, and subjective wellbeing. *Personality and Social Psychology Bulletin, 27,* 1674–1682.

Oishi, S., & Westgate, E. C. (2022). A psychologically rich life: Beyond happiness and meaning. *Psychological Review, 129*(4), 790–811. https://doi.org/10.1037/rev0000317

Oláh, K., & Király, I. (2019). Young children selectively imitate models conforming to social norms. *Frontiers in Psychology*, *10*, 1399.

Oleś, M. (2016). Dimensions of identity and subjective quality of life in adolescents. *Social Indicators Research*, *126*, 1401–1419.

Oliveira, J. (2013a). *Happiness and gratitude: A HEXACO personality structure paradigm.* American Psychological Association Convention Presentation. http://psycnet.apa.org/psycextra/603312013-001.pdf

Oliveira, J. (2013b). *Role of aggression and empathy in the Dark Triad of personality*. American Psychological Association Convention Presentation. http://psycnet.apa.org/doi/10.1037/e603302013–001.pdf

Olson, E., Fanning, J., Awick, E., & Chung, H. (2014). Differential trajectories of well-being in older adult women: The role of optimism. *Applied Psychology: Health and Well-Being, 6,* 362–380.

Olthof, T., Schouten, A., Kuiper, H., Stegge, H., & Jennekens-Schinkel, A. (2000). Shame and guilt in children: Differential situational antecedents and experiential correlates. *British Journal of Developmental Psychology, 18*, 51–64.

O'Neal, K., Vosvick, M., Catalano, D., & Logan, M. (2010). *Am I worth it? Loneliness, self-esteem, and locus of control: Correlates of meaning-in-life.* American Psychological Association Convention Presentation.

O'Neill, R. M., & Bornstein, R. F. (1990). Oral-dependence and gender: Factors in help-seeking response set and self-reported pathology in psychiatric inpatients. *Journal of Personality Assessment, 55,* 28–40.

Ong, E. Y., Ang, R. P., Ho, J. C., Lim, J. C., Goh, D. H., Lee, C. S., & Chua, A. Y. (2011). Narcissism, extraversion and adolescents' self-presentation on Facebook. *Personality and Individual Differences*, *50*(2), 180–185.

Onyeizugbo, E. (2010). Self-efficacy, gender and trait anxiety as moderators of test anxiety. *Electronic Journal of Research in Educational Psychology, 8*(1), 299–312.

Oostenbroek, J., & Over, H. (2015). Young children contrast their behavior to that of out-group members. *Journal of Experimental Child Psychology*, *139*, 234–241.

Orejudo, S., Puyuelo, M., Fernandez-Turrado, T., & Ramos, T. (2012). Optimism in adolescence: A cross-sectional study of the influence of family and peer group

variables on junior high school students. *Personality and Individual Differences, 52,* 812–817.

Orgler, H. (1963). *Alfred Adler, the man and his work: Triumph over the inferiority complex.* New American Library.

O'Riordan, S., & O'Connell, M. (2014). Predicting adult involvement in crime: Personality measures are significant, socio-economic measures are not. *Personality and Individual Differences, 68,* 98–101.

Orlofsky, J. L., Marcia, J. E., & Lesser, I. M. (1973). Ego identity status and the intimacy versus isolation crisis of young adulthood. *Journal of Personality and Social Psychology, 27,* 211–219.

Ormel, J., Riese, H., & Rosmalen, J. G. (2012). Interpreting neuroticism scores across the adult life course: immutable or experience-dependent set points of negative affect? *Clinical Psychology Review*, *32*(1), 71–79.

Ormel, J., & Wohlfarth, T. (1991). How neuroticism, long-term difficulties, and life situation changes influence psychological distress: A longitudinal model. *Journal of Personality and Social Psychology, 60,* 744–755.

Oros, J. S. D. R. M., Encenzo, Z. D., Takling, B. J. O., Apugan, R. M. I., Lingatong, J. D., Parviz, K., Aghamohamadian-Sharbaf, H. R., Dehghani, M., & Ghanbari-Hashemabadi, B. A. (2017). Study of the relationship between superego and metacognition of male and female students. *Journal of Fundamentals of Mental Health*, *19*(2).

Oros, J. S. D. R. M., Encenzo, Z. D., Takling, B. J. O., Apugan, R. M. I., Lingatong, J. D., & Pon, J. O. (2019). The Role of the Oedipus Complex on the Perceived Romantic Security of Males. *International Journal of Scientific and Research Publications, 9*(4).

Orosz, G., Tóth-Király, I., Büki, N., Ivaskevics, K., Bőthe, B., & Fülöp, M. (2018). The four faces of competition: The development of the Multidimensional Competitive Orientation Inventory. *Frontiers in Psychology*, *9*. https://doi.org/10.3389/fpsyg.2018.00779

Orth, U., & Robins, W. (2014). The development of self-esteem. *Current Directions in Psychological Science, 23*, 381–387.

Orth, U., Trzesniewski, K., & Robins, R. (2010). Self-esteem development from young adulthood to old age: A cohort-sequential longitudinal study. *Personality Processes and Individual Differences, 98*, 645–658.

Ortin, A., Lake, A., Kleinman, M., & Gould, M. (2012). Sensation seeking as risk factor for suicidal ideation and suicide attempts in adolescence. *Journal of Affective Disorders, 143,* 214–222.

Ortiz, F. A. (2017). Self-actualization in the Latino/Hispanic culture. *Journal of Humanistic Psychology*, *60*(3), 418–435. https://doi.org/10.1177/0022167817741785

Ortiz, F. A. (2020). Self-actualization in the Latino/Hispanic culture. *Journal of Humanistic Psychology, 60*(3), 418–435.

Osnos, E. (2011, January 10). Meet Dr. Freud: Does psychoanalysis have a future in an authoritarian state? *New Yorker*, pp. 54–63.

Overmier, J. B., & Seligman, M. E. P. (1967). Effects of inescapable shock upon subsequent escape and avoidance learning. *Journal of Comparative and Physiological Psychology, 63,* 28–33.

Overskeid, G., Gronnerod, C., & Simonton, D. (2012). The personality of a nonperson: Gauging the inner Skinner. *Perspectives on Psychological Science, 7,* 187–197.

Owen, J., & Lindley, L. (2010). Therapists' cognitive complexity: Review of theoretical models and development of an integrated approach for training. *Training and Education in Professional Psychology, 4,* 128–132.

Owen, S. (2006). Occupational stress among correctional supervisors. *Prison Journal, 86,* 164–181.

Padilla-Walker, L. M., Nelson, L. J., Carroll, J. S., & Jensen, A. C. (2010). More than a just a game: Video game and internet use during emerging adulthood. *Journal of Youth and Adolescence*, *39*, 103–113.

Paige, J. M. (1966). Letters from Jenny: An approach to the clinical analysis of personality structure by computer. In P. J. Stone (Ed.), *The general inquirer: A computer approach to context analysis.* MIT Press.

Paleczek, D., Bergner, S., & Rybnicek, R. (2018). Predicting career success: Is the dark side of personality worth considering? *Journal of Managerial Psychology*, *33*(6), 437–456.

Palmer, C. L., & Peterson, R. D. (2021). Physical attractiveness, halo effects, and social joining. *Social Science Quarterly*, *102*(1), 552–566. https://doi.org/10.1111/ssqu.12892

Panek, E. (2014). Left to their own devices: College students "guilty pleasure" media use and time management. *Communication Research, 41*(4), 561–577.

Paolacci, G., & Chandler, J. (2014). Inside the Turk: Understanding Mechanical Turk as a participant pool. *Current Directions in Psychological Science, 23,* 184–188.

Papastylianou, A. (2013). Relating on the Internet, personality traits and depression: Research and implications. *European Journal of Counseling Psychology, 2,* 65–78.

Papazova, E., & Pencheva, E. (2008). Adolescent self-esteem and psychological type. *Journal of Psychological Type, 68*(8), 1–10.

Pappas, S. (2010, October 4). Don't worry: Happiness levels not set in stone. *Yahoo! News*.

Paradis, A., & Boucher, S. (2019). Child maltreatment history and interpersonal problems in adult couple relationships. In *The Effect of Childhood Emotional Maltreatment on Later Intimate Relationships* (pp. 139–158). Routledge.

Paris, B. J. (1994). *Karen Horney: A psychoanalyst's search for self-understanding.* Yale University Press.

Paris, R., & Helson, R. (2002). Early mothering experience and personality change. *Journal of Family Psychology, 16,* 172–185.

Park, C., Armeli, S., & Tennen, H. (2004). Appraisal-coping goodness of fit: A daily Internet study. *Personality and Social Psychology Bulletin, 30,* 558–569.

Park, D., & Huang, C. (2010). Culture wires the brain: A cognitive neuroscience perspective. *Perspectives on Psychological Science, 5*(4), 391–400.

Park, J., van den Broek, K. L., Bhullar, N., Ogunbode, C. A., Schermer, J. A., Doran, R., Ardi, R., Hanss, D., Maran, D. A., Albzour, M., Aquino, S. D., Ayanian, A. H., Chegeni, R., Chukwuorji, J. B. C., Enea, V., Ghanbarian, E., Ghorayeb, J., Jiang, F., Kehinde, O. A., . . . Yadav, R. (2022). Comparison of the inter-item correlations of the Big Five Inventory-10 (BFI-10) between Western and non-Western contexts. *Personality and Individual Differences*, *196*, 111751. https://doi.org/10.1016/j.paid.2022.111751

Park, N., & Huebner, E. (2005). A cross-cultural study of the levels and correlates of life satisfaction among adolescents. *Journal of Cross-Cultural Psychology, 36,* 444–456.

Park, S. Q., Kahnt, T., Dogan, A., Strang, S., Fehr, E., & Tobler, P. N. (2017). A neural link between generosity and happiness. *Nature Communications*, *8*(1), 15964. https://doi.org/10.1038/ncomms15964

Paszkowska-Rogacz, A., & Kabzinska, Z. (2012). Applications of Kelly's personal construct theory to vocational guidance. *Psychology Research, 2*(7), 408–421.

Patch, E. A., & Figueredo, A. J. (2017). Childhood stress, life history, psychopathy, and sociosexuality. *Personality and Individual Differences, 115*, 108–113. https://doi.org/10.1016/j.paid.2016.04.023

Patterson, T. (2014). Early recollections and trauma in police officers. *Dissertation Abstracts International. Section B: Sciences and Engineering. Vol. 75 (1-BE).*

Patterson, T., & Joseph, S. (2007). Person-centered personality theory: Support from self-determination theory and positive psychology. *Journal of Humanistic Psychology, 47,* 117–139.

Patton, C. L., Smith, S. F., & Lilienfeld, S. O. (2018). Psychopathy and heroism in first responders: Traits cut from the same cloth? *Personality Disorders: Theory, Research, and Treatment*, *9*(4), 354. http://dx.doi.org/10.1037/per0000261

Paul, H. (2010). The Karen Horney clinic and the legacy of Horney. *American Journal of Psychoanalysis, 70,* 63–64.

Paulhus, D., & Williams, K. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality, 36,* 556–563.

Paunonen, S. V. (1998). Hierarchical organization of personality and prediction of behavior. *Journal of Personality and Social Psychology, 74,* 538–556.

Paunonen, S. V., & Ashton, M. C. (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology, 81,* 524–539.

Pechorro, P., Jonason, P. K., Raposo, V., & Maroco, J. (2021). Dirty Dozen: A concise measure of Dark Triad traits among at-risk youths. *Current Psychology*, *40*, 3522–3531. https://doi.org/10.1007/s12144-019-00288-9

Pedersen, N. L., Plomin, R., McClearn, G. E., & Friberg, L. (1988). Neuroticism, extraversion, and related traits in adult twins reared apart and reared together. *Journal of Personality and Social Psychology, 55,* 950–957.

Pedersen, S. L., Molina, B. S., Belendiuk, K. A., & Donovan, J. E. (2012). Racial differences in the development of impulsivity and sensation seeking from childhood into adolescence and their relation to alcohol use. *Alcoholism: Clinical and Experimental Research*, *36*(10), 1794–1802.

Pellerone, M., Ramaci, T., Herrera López, M., & Craparo, G. (2017). The role of identity development and decision making process on adult attachment: A cross-national study in Sicilian and Andalusian adolescents. *Clinical Neuropsychiatry*, *14*(2).

Peltzer, K., Malaka, D., & Phaswana, N. (2001). Psychological correlates of substance use among South African university students. *Social Behavior and Personality, 29,* 799–806.

Peluso, P., Peluso, J., Buckner, J., Curlette, W., & Kern, R. (2004). An analysis of the reliability of the BASIS-A Inventory using a northeastern and southeastern U.S. sample. *Journal of Individual Psychology, 60,* 294–307.

Penard, T., Poussing, N., & Suire, R. (2013). Does the Internet make people happier? *Journal of Socio-Economics, 46,* 105–116.

Penke, L., Denissen, J. J., & Miller, G. F. (2007). The evolutionary genetics of personality. *European Journal of Personality: Published for the European Association of Personality Psychology*, *21*(5), 549–587.

Perugini, M., Costantini, G., Hughes, S., & De Houwer, J. (2016). A functional perspective on personality. *International Journal of Psychology*, *51*(1), 33–39.

Pervin, L. A. (1984). *Current controversies and issues in personality* (2nd ed.). Wiley.

Pervin, L. A. (2003). *The science of personality* (2nd ed.). New York: Oxford University Press.

Pesant, N., & Zadra, A. (2006). Dream content and psychological well-being: A longitudinal study of the continuity hypothesis. *Journal of Clinical Psychology, 62,* 111–121.

Petchkovsky, L., Petchkovsky, M., Morris, P., Dickson, P., Montgomery, D., Dwyer, J., & Burnett, P. (2013). fMRI responses to Jung's Word Association Test: Implications for theory, treatment and research. *Journal of Analytical Psychology, 58*(3), 409–431.

Peteet, B., Brown, C., Lige, Q., & Lanaway, D. (2014). Imposterism is associated with greater psychological distress and lower self-esteem for African American students. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues,* 1–10.

Peterson, B. E. (2002). Longitudinal analysis of midlife generativity, intergenerational roles, and caregiving. *Psychology and Aging, 17,* 161–168.

Peterson, B. E., Smirles, K. A., & Wentworth, P. A. (1997). Generativity and authoritarianism: Implications for personality, political involvement, and parenting. *Journal of Personality and Social Psychology, 72,* 1202–1216.

Peterson, C., Maier, S. F., & Seligman, M. E. P. (1993). *Learned helplessness: A theory for the age of personal control*. Oxford University Press.

Peterson, C., & Seligman, M. E. P. (1987). Explanatory style and illness. Special issue: Personality and physical health. *Journal of Personality, 55,* 237–265.

Petrosky, M. J., & Birkhimer, J. C. (1991). The relationship among locus of control coping styles and psychological symptom reporting. *Journal of Clinical Psychology, 47,* 336–345.

Pettigrew, T. F., & Tropp, L. R. (2000). Does intergroup contact reduce prejudice: Recent meta-analytic findings. In S. Oskamp (Ed.), *Reducing prejudice and discrimination* (pp. 93–114). Lawrence Erlbaum Associates Publishers.

Pettigrew, T. F., Tropp, L. R., Wagner, U., & Christ, O. (2011). Recent advances in intergroup contact theory. *International Journal of Intercultural Relations*, *35*(3), 271–280.

Phan, H. P., & Ngu, B. H. (2016). Sources of self-efficacy in academic contexts: A longitudinal perspective. *School Psychology Quarterly*, *31*(4), 548.

Phares, E. J. (1993). From therapy to research: A patient's legacy. In G. G. Brannigan & M. R. Merrens (Eds.), *The undaunted psychologist: Adventures in research* (pp. 157–171). Temple University Press.

Phelps, A., & Forbes, D. (2012). Treating post-traumatic stress disorder-related dreams: What are the options? *Expert Review of Neurotherapeutics, 12,* 1267–1269.

Phillips, D. P. (1974). The influence of suggestion on suicide: Substantive and theoretical implications of the Werther effect. *American Sociological Review, 39,* 340–354.

Phillips, D. P. (1983). The impact of mass media violence on U.S. homicides. *American Sociological Review, 48,* 560–568.

Phillips, D. P. (1985). The found experiment: A new technique for assessing impact of mass media violence on real-world aggressive behavior. In G. Comstock (Ed.), *Public communication and behavior* (Vol. 1). Academic Press.

Phinney, J. S., & Chavira, V. (1992). Ethnic identity and self-esteem: An exploratory longitudinal study. *Journal of Adolescence, 15,* 271–281.

Phipps, S., & Steele, R. (2002). Repressive adaptive style in children with chronic illness. *Psychosomatic Medicine, 64,* 34–42.

Piekałkiewicz, M. (2017). Why do economists study happiness? *The Economic and Labour Relations Review*, *28*(3), 361–377.

Piekkola, B. (2011). Traits across cultures: A neo-Allportian perspective. *Journal of Theoretical and Philosophical Psychology, 31,* 2–24.

Pierre, M., & Mahalik, J. (2005). Examining African self-consciousness and Black racial identity as predictors of Black men's psychological well-being. *Cultural Diversity and Ethnic Minority Psychology, 11,* 28–40.

Pilkington, B., & Lenaghan, M. (1998). Psychopathology. In K. Trew & J. Kremer (Eds.), *Gender and psychology* (pp. 179–191). New York: Oxford University Press.

Pillay, Y. (2005). Racial identity as a predictor of the psychological health of African American students at a predominantly White university. *Journal of Black Psychology, 31,* 46–66.

Pincott, J. (2013, March 13). Most of us live in fear of unleashing a Freudian slip. Do you? *Psychology Today*. http://www.psychologytoday.com/articles/201203/slips-the-tongue

Pinquart, M., & Soerensen, S. (2000). Influences of socioeconomic status, social network, and competence on subjective well-being in later life: A meta-analysis. *Psychology and Aging, 15,* 187–224.

Piotrowski, K., Brzezińska, A. I., & Luyckx, K. (2020). Adult roles as predictors of adult identity and identity commitment in Polish emerging adults: Psychosocial maturity as an intervening variable. *Current Psychology*, *39*, 2149–2158.

Pittenger, D. J. (2005). Cautionary comments regarding the Myers-Briggs Type Indicator. *Consulting Psychology Journal: Practice and Research, 57*(3), 210–221. https://doi.org/10.1037/1065-9293.57.3.210

Plaut, V., Markus, H., & Lachman, M. (2002). Place matters: Consensual features and regional variation in American wellbeing and self. *Journal of Personality and Social Psychology, 83,* 160–184.

Plotka, I., Simane-Vigante, L., & Blumenau, N. (2018). Implicit association self-concept test in studying of violence-related cognitions. *Social Psychology & Society*, *9*(3).

Podd, M. H., Marcia, J. E., & Rubin, R. (1968). The effects of ego identity status and partner perception on a prisoner's dilemma game. *Journal of Social Psychology, 82,* 117–126.

Podlog, L., & Eklund, R. (2010). Returning to competition after a serious injury: The role of self-determination. *Journal of Sports Sciences, 28*(8), 819–831.

Poling, A., Weetjens, B., Cox, C., Beyene, N., Bach, H., & Sully, A. (2010). Teaching giant African pouched rats to find landmines: Operant conditioning with real consequences. *Behavior Analysis in Practice, 3*(2), 19–25.

Pollak, S., & Sinha, P. (2002). Effects of early experience on children's recognition of facial displays of emotion. *Developmental Psychology, 38,* 784–791.

Pollett, T., Dijkstra, P., Barelds, D., & Buunk, A. (2010). Birth order and the dominance aspect of extraversion: Are firstborns more extraverted, in the sense of being dominant, than later-borns? *Journal of Research in Personality, 44,* 742–745.

Porcerelli, J. H., Thomas, S., Hibbard, S., & Cogan, R. (1998). Defense mechanisms development in children, adolescents, and late adolescents. *Journal of Personality Assessment, 71,* 411–420.

Poropat, A. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin, 135,* 322–338.

Porter, S., Bhanwer, A., Woodworth, M., & Black, P. (2014). Soldiers of misfortunate: An examination of the Dark Triad and the experience of schadenfreude. *Personality and Individual Differences, 67,* 64–68.

Possidónio, C., Piazza, J., Graça, J., & Prada, M. (2022). An appetite for meat? Disentangling the influence of animal resemblance and familiarity. *Appetite*, *170*, 1–12. https://doi.org/10.1016/j.appet.2021.105875

Postmes, T., & Branscombe, N. (2002). Influence of long-term racial environmental composition on subjective well-being in African Americans. *Journal of Personality and Social Psychology, 83,* 735–751.

Potter, S., Drewelies, J., Wagner, J., Duezel, S., Brose, A., Demuth, I., Steinhagen-Thiessen, E., Lindenberger, U., Wagner, G. G., & Gerstorf, D. (2020). Trajectories of multiple subjective well-being facets across old age: The role of health and personality. *Psychology and Aging*, *35*(6), 894.

Pozios, V., Kamban, P., & Bender, E. (2013, August 23). Does media violence lead to the real thing? *New York Times.*

Prelow, H., Mosher, C., & Bowman, M. (2006). Perceived racial discrimination, social support, and psychological adjustment among African-American college students. *Journal of Black Psychology, 32,* 442–454.

Prenda, K., & Lachman, M. (2001). Planning for the future: A life management strategy for increasing control and life satisfaction in adulthood. *Psychology and Aging, 16,* 206–216.

Prinzie, P., Stams, G., Dekovic, M., Reijntjes, A. H. A., & Belsky, J. (2009). The relations between parents Big Five personality factors and parenting: A meta-analytic review. *Journal of Personality and Social Psychology, 97(2),* 351–362.

Prochnik, G. (2006). *Putnam camp: Sigmund Freud, James Jackson Putnam, and the purpose of American psychology*. New York: Other Press.

Proctor, C., Tweed, R., & Morris, D. (2016). The Rogerian fully functioning person. *Journal of Humanistic Psychology*, *56*(5), 503–529. https://doi.org/10.1177/0022167815605936

Proctor, C., Tweed, R. G., & Morris, D. B. (2021). Unconditional positive self-regard: The role of perceived parental conditional regard. *The Humanistic Psychologist*, *49*(3), 400–422. https://doi.org/10.1037/hum0000168

Purol, M. F., & Chopik, W. J. (2021). Optimism: Enduring resource or miscalibrated perception? *Social and Personality Psychology Compass*, *15*(5), e12593.

Pyszczynski, T., Greenberg, J., Solomon, S., Arndt, J., & Schimel, J. (2004). Why do people need self-esteem? A theoretical and empirical review. *Psychological Bulletin, 130*, 435–468.

Qing-Xin, S., Rong-Gang, Z., & Yan, G. (2005). Internet addiction disorder and sensation seeking of middle school and high school students. *Chinese Mental Health Journal, 19,* 453–456.

Quiery, N. (1998). Parenting the family. In K. Trew & J. Kremer (Eds.), *Gender and psychology* (pp. 129–140). New York: Oxford University Press.

Quinn, A. (2011). A person-centered approach to the treatment of borderline personality disorder. *Journal of Humanistic Psychology*, *51*(4), 465–491. https://doi.org/10.1177/0022167811399764

Quinn, A. (2012). A person-centered approach to multicultural counseling competence. *Journal of Humanistic Psychology*, *53*(2), 202–251. https://doi.org/10.1177/0022167812458452

Quinn, S. (1987). *A mind of her own: The life of Karen Horney*. Summit Books.

Rabinowitz, P. (2005). Is noise bad for your health? *Lancet, 365* (9475), 1908–1909.

Raby, K. L., Lawler, J. M., Shlafer, R. J., Hesemeyer, P. S., Collins, W. A., & Sroufe, L. A. (2015). The interpersonal antecedents of supportive parenting: A prospective, longitudinal study from infancy to adulthood. *Developmental Psychology*, *51*(1), 115.

Rader, C. A., Larrick, R. P., & Soll, J. B. (2017). Advice as a form of social influence: Informational motives and the consequences for accuracy. *Social and Personality Psychology Compass*, *11*(8), e12329.

Radsepehr, H., Shareh, H., & Dehnabi, A. (2019). Evaluation of positive and negative affect induction on the regional brain activity and personality traits. *Practice in Clinical Psychology*, *7*(2), 95–106.

Raikkonen, K., Katainen, S., Keskivaara, P., & Kelikangas-Jarvinen, L. (2000). Temperament, mothering, and hostile attitudes: A 12-year longitudinal study. *Personality and Social Psychology Bulletin, 26*(1), 3–12.

Raedts, I., Petkovic, M., Usenko, Y. S., van der Werf, J. M. E., Groote, J. F., & Somers, L. J. (2007). Transformation of BPMN models for behaviour analysis. *MSVVEIS*, *2007*, 126–137.

Raine, A., Reynolds, C., Venables, P., & Mednick, S. (2002). Stimulation seeking and intelligence: A prospective longitudinal study. *Journal of Personality and Social Psychology, 82,* 663–674.

Rajan, S. K., Harifa, P. R., & Pienyu, R. (2017). Academic resilience, locus of control, academic engagement and self-efficacy among the school children. *Indian Journal of Positive Psychology*, *8*(4), 507–511.

Rakoczy, H., & Schmidt, M. F. (2013). The early ontogeny of social norms. *Child Development Perspectives*, 7(1), 17–21.

Ramirez-Maestre, C., Esteve, R., & Lopez, A. (2012). The role of optimism and pessimism in chronic pain patients adjustment. *Spanish Journal of Psychology, 15,* 286–294.

Ramos-Sanchez, L., & Atkinson, D. (2009). The relationship between Mexican American acculturation, cultural values, gender, and help-seeking intentions. *Journal of Counseling and Development, 87,* 62–71.

Rani, V., Kamboj, S., Malik, A., & Kohli, S. (2015). A study of emotional maturity in relation to self-confidence and insecurity in adolescents. *Indian Journal of Positive Psychology*, *6*(4), 393.

Rask, K. N., & Bailey, E. M. (2002). Are faculty role models? Evidence from major choice in an undergraduate institution. *The Journal of Economic Education*, *33*(2), 99–124.

Raskauskas, J., Rubiano, S., Offen, I., & Wayland, A. K. (2015). Do social self-efficacy and self-esteem moderate the relationship between peer victimization and academic performance? *Social Psychology of Education*, *18*, 297–314.

Rather, M. A., & Khan, M. A. (2020). A correlational study on emotional intelligence and self-actualization of creative writers. *Indian Journal of Positive Psychology*, *11*(4), 308–312.

Raufelder, D., Regner, N., & Wood, M. A. (2018). Test anxiety and learned helplessness is moderated by student perceptions of teacher motivational support. *Educational Psychology*, *38*(1), 54–74.

Rauscher, E., Conley, D., & Siegal, M. L. (2015). Sibling genes as environment: Sibling dopamine genotypes and adolescent health support frequency dependent selection. *Social Science Research, 54*, 209–220.

Ravert, R., Schwartz, S., Zamboanga, B., Kim, S., Weisskirch, R., & Bersamin, M. (2009). Sensation seeking and danger invulnerability: Paths to college student risk-taking. *Personality and Individual Differences, 47,* 763–768.

Rayle, A. (2005). Adolescent gender differences in mattering and wellness. *Journal of Adolescence, 28,* 753–763.

Raynor, D., & Levine, H. (2009). Associations between the five-factor model of personality and health behaviors among college students. *Journal of American College Health, 58,* 73–81.

Reid, L., & Foels, R. (2010). Cognitive complexity and the perception of subtle racism. *Basic and Applied Social Psychology, 32,* 201–301.

Reigeluth, C. S., & Addis, M. E. (2016). Adolescent boys' experiences with policing of masculinity: Forms, functions, and consequences. *Psychology of Men & Masculinity, 17*(1), 74–83. https://doi.org/10.1037/a0039342

Reimanis, G. (1974). Personality development, anomie, and mood. *Journal of Personality and Social Psychology, 29,* 355–357.

Reio Jr, T. G., & Sanders-Reio, J. (2006). Sensation seeking as an inhibitor of job performance. *Personality and Individual Differences, 40*(4), 631–642.

Ren, X., Wang, T., & Jarrold, C. (2016). Individual differences in frequency of inner speech: Differential relations with cognitive and non-cognitive factors. *Frontiers in Psychology*, *7*, 1675.

Rendon, D. (1987). Understanding social roles from a Horneyan perspective. *American Journal of Psychoanalysis, 47,* 131–142.

Rennebohm, S. B., Seebeck, J., & Thoburn, J. W. (2017). Attachment, dyadic adjustment, and social interest: An indirect effects model. *The Journal of Individual Psychology, 73*(3), 208–224. https://doi.org/10.1353/jip.2017.0017

Rentfrow, P. (2010). Statewide differences in personality: Towards a psychological geography of the United States. *American Psychologist, 65,* 548–558.

Rentfrow, P., Mellander, C., & Florida, R. (2009). Happy states of America: A state-level analysis of psychological, economic, and social well-being. *Journal of Research in Personality, 43,* 1073–1082.

Reppucci, N. D., & Saunders, J. T. (1974). Social psychology of behavior modification: Problems of implementation in natural settings. *American Psychologist, 29*(9), 649.

Rettner, R. (2010, August 12). Birth order affects child's intelligence and personality. *Yahoo Live Science*.

Revelle, W. (2009). Commentary: Personality structure and measurement: The contributions of Raymond Cattell. *British Journal of Psychology, 100,* 253–257.

Revelle, W., & Oehlberg, K. (2008). Integrating experimental and observational personality research: The contributions of Hans Eysenck. *Journal of Personality, 76,* 1387–1414.

Reynolds, T. A. (2021). Our grandmothers' legacy: Challenges faced by female ancestors leave traces in modern women's same-sex relationships. *Archives of Sexual Behavior* (target article), *51*(7), 3225–3256.

Reynolds, T. A., Makhanova, A., McNulty, J. K., Eckel, L. A., Nikonova, L., & Maner, J. K. (2018). Progesterone and women's interpersonal anxiety across the menstrual cycle. *Hormones and Behavior, 102*, 38–40.

Reynolds, T. A., & Palmer-Hague, J. (2022). Did you hear what she did to me? Female friendship victimization disclosures offer reputational advantages. *Journal of Experimental Social Psychology*, *101*, 104311.

Rice, B. (1968, March 17). Skinner agrees he is the most important influence in psychology. *New York Times Magazine,* p. 27ff.

Rice, T., & Steele, B. (2004). Subjective well-being and culture across time and space. *Journal of Cross-Cultural Psychology, 35,* 633–647.

Richards, J., Jiang, X., Kelly, P., Chau, J., Bauman, A., & Ding, D. (2015). Don't worry, be happy: Cross-sectional associations between physical activity and happiness in 15 European countries. *BMC Public Health*, *15*(1), 1–8. [53] https://doi.org/10.1186/s12889-015-1391-4

Richelle, M. N. (1993). *B. F. Skinner: A reappraisal*. Erlbaum.

Riendeau, J., Stinchcombe, A., Weaver, B., & Bedard, M. (2018). Personality factors are associated with simulated driving outcomes across the driving lifespan. *Transportation Research Part F: Traffic Psychology and Behaviour*, *54*, 171–187.https://doi.org/10.1016/j.trf.2018.01.022

Riggio, R. E., & Friedman, H. S. (1986). Impression formation: The role of expressive behavior. *Journal of Personality and Social Psychology, 50,* 421–427.

Riggio, R. E., Lippa, R., & Salinas, C. (1990). The display of personality in expressive movement. *Journal of Research in Personality, 24,* 16–31.

Rimsh, A., & Pietrowsky, R. (2022). Characteristics of dreams and nightmares in patients with anxiety disorders. *Dreaming*, *32*(3), 314–329. https://doi.org/10.1037/drm0000211

Roazen, P. (1975). *Freud and his followers.* Knopf.

Roazen, P. (1993). *Meeting Freud's family.* Amherst: University of Massachusetts Press.

Roberti, J. (2004). A review of behavioral and biological correlates of sensation seeking. *Journal of Research in Personality, 38,* 256–279.

Roberts, B. W., Caspi, A., & Moffitt, T. E. (2001). The kids are alright: Growth and stability in personality development from adolescence to adulthood. *Journal of Personality and Social Psychology*, *81*(4), 670.

Roberts, B. W., Caspi, A., & Moffitt, T. E. (2003). Work experiences and personality development in young adulthood. *Journal of Personality and Social Psychology*, *84*(3), 582.

Roberts, B. W., & DelVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin*, *126*(1), 3.

Roberts, B. W., & Robins, R. W. (2000). Brood dispositions, brood aspirations: The intersection of personality traits and major life goals. *Personality and Social Psychology Bulletin, 26,* 1284–1296.

Roberts, B. W., Walton, K. E., & Viechtbauer, W. (2006). Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychological Bulletin*, *132*(1), 1.

Robinson, M. D., & Wilkowski, B. M. (2006). Loving, hating, vacillating: Agreeableness, implicit self-esteem, and neurotic conflict. *Journal of Personality*, *74*(4), 935–978.

Robinson, O., Demetre, J., & Corney, R. (2010). Personality and retirement: Exploring the links between the Big Five personality traits, reasons for retirement and the experience of being retired. *Personality and Individual Differences, 48,* 792–797.

Robinson, O., & Stell, A. (2014, September 19). Later-life crisis: Towards a holistic model. *Journal of Adult Development*. http://link.springer.com/article/10.1007/s10804-014-9199-5

Robinson-Whelen, S., Kim, C., MacCallum, R. C., & Kiecolt-Glaser, J. K. (1997). Distinguishing optimism from pessimism in older adults. *Journal of Personality and Social Psychology, 73,* 1345–1353.

Rocha Lopes, D., van Putten, K., & Moormann, P. P. (2015). The impact of parental styles on the development of psychological complaints. *Europe's Journal of Psychology*, *11*(1), 155–168. https://doi.org/10.5964/ejop.v11i1.836

Rodgers, J. L. (2001). What causes birth order-intelligence patterns? The admixture hypothesis, revised. *American Psychologist, 56,* 505–510.

Rodrigues, N., & Deuskar, M. (2018). The relationship between self-actualization, locus of control and openness to experience. *Indian Journal of Positive Psychology*, *9*(2), 238–241.

Roesler, C. (2018). Dream content corresponds with dreamer's psychological problems and personality structure and with improvement in psychotherapy: A typology of dream patterns in dream series of patients in analytical psychotherapy. *Dreaming, 28*(4), 303–321. https://doi.org/10.1037/drm0000092

Roesler, C. (2020). Jungian theory of dreaming and contemporary dream research–findings from the research project "Structural Dream Analysis." *Journal of Analytical Psychology*, *65*(1), 44–62.

Rogers, C. R. (1954). The case of Mrs. Oak: A research analysis. In C. R. Rogers & R. F. Dymond (Eds.), *Psychotherapy and personality change.* University of Chicago Press.

Rogers, C. R. (1961). *On becoming a person: A therapist's view of psychotherapy.* Houghton Mifflin.

Rogers, C. R. (1967). Autobiography. In E. G. Boring & G. Lindzey (Eds.), *A history of psychology in autobiography* (Vol. 5, pp. 341–384). Appleton-Century-Crofts.

Rogers, C. R. (1970). *Carl Rogers on encounter groups.* Harper & Row.

Rogers, C. R. (1974). In retrospect: Forty-six years. *American Psychologist, 29,* 115–123.

Rogers, C. R. (1980). *A way of being*. Houghton Mifflin.

Rogers, C. R. (1987). An interview with Carl Rogers. In A. O. Ross (Ed.), *Personality: The scientific study of complex human behavior* (pp. 118–119). Holt, Rinehart & Winston.

Rogers, L. (2013). Young, Black and male: Exploring the intersections of racial and gender identity in an all-Black male high school. *Dissertation Abstracts International. Section B: Sciences and Engineering, 73.* http://psycnet.apa.org/index. cfm?fa=search.displayRecord&id=877CD6F1-BADB-27BC-B749-31521990A714&resultID=2&page=1&dbTab=all&search=true

Rogoff, B., Paradise, R., Arauz, R. M., Correa-Chavez, M., & Angelillo, C. (2003). First-hand learning through intent participation. *Annual Review of Psychology, 54,* 175–203.

Rolison, J. J., Hanoch, Y., & Gummerum, M. (2013). Characteristics of offenders: The HEXACO model of personality as a framework for studying offenders' personality. *The Journal of Forensic Psychiatry & Psychology*, *24*(1), 71–82.

Romero, E., Villar, P., & López-Romero, L. (2015). Assessing six factors in Spain: Validation of the HEXACO-100 in relation to the five factor model and other conceptually relevant criteria. *Personality and Individual Differences*, *76*, 75–81. https://doi.org/10.1016/j.paid.2014.11.056

Ronaldson, A., Poole, L., Kidd, T., Leigh, E., Jahangiri, M., & Steptoe, A. (2014, August 3). Optimism measured preoperatively is associated with reduced pain intensity and physical symptom reporting after coronary artery bypass graft surgery. *Journal of Psychosomatic Research.* http://www.ncbi.nlm.nih.gov/pubmed/25129850

Ronen, T., Hamama, L., Rosenbaum, M., & Mishely-Yarlap, A. (2014, October 8). Subjective well-being in adolescence: The role of self-control, social support, age, gender, and familial crisis. *Journal of Happiness Studies*. http://link.springer.com/ article/10.1007/s10902-014-9585-5#page-2

Rosati, F., Pistella, J., Giovanardi, G., & Baiocco, R. (2021). Queer generativity in lesbian, gay, and bisexual older adults: Personal, relational, and political/social behaviours. *Journal of Community & Applied Social Psychology*, *31*(6), 673–689.

Rose, A. J., Carlson, W., & Waller, E. M. (2007). Prospective associations of co-rumination with friendship and emotional adjustment: Considering the socioemotional trade-offs of co-rumination. *Developmental Psychology, 43*(4), 1019–1031. https://doi.org/10.1037/0012-1649.43.4.1019

Rose, S. (2010, August). Hans Eysenck's controversial career [Review of the book *Playing with fire: The controversial career of Hans J. Eysenck,* by R. Buchanan. Oxford University Press, 2010]. *Lancet, 376,* 407–408.

Rosenthal, D. R., Gurney, M. R., & Moore, S. M. (1981). From trust to intimacy: A new inventory for examining Erikson's stages of psychosocial development. *Journal of Youth and Adolescence, 10,* 525–536.

Rosenzweig, S. (1985). Freud and experimental psychology: The emergence of idiodynamics. In S. Koch & D. Leary (Eds.), *A century of psychology as science* (pp. 135–207). New York: McGraw-Hill.

Rosik, C. H., Rosel, G., Slivoskey, M. M., Ogdon, K. M., Roos, I. K., Kincaid, T. M., & Castanon, M. R. (2017). MMPI-2 profiles among Asian American missionary candidates: Gendered comparisons for ethnicity and population norms. *Asian American Journal of Psychology, 8*(2), 167.

Ross, C., Orr, E., Sisic, M., Arseneault, M., Simmering, M. G., & Orr, R. (2009). Personality and motivations associated with Facebook use. *Computers in Human Behavior, 24,* 578–586.

Rotenberg, K. J., Teunisse, A. K., Case, T. I., Fitness, J., & Sweller, N. (2023). How much should we trust others? The relationship between trust beliefs in others and psychosocial adjustment. *Journal of Social and Clinical Psychology*, *42*(1), 85–102. https://doi.org/10.1521/jscp.2023.42.1.85

Roth, M., & Hammelstein, P. (2012). The Need Inventory of Sensation Seeking (NISS). *European Journal of Psychological Assessment, 28,* 11–18.

Rothon, C., Arephin, M., Klineberg, E., Cattell, V., & Stansfeld, S. (2011). Structural and socio-psychological influences on adolescents' educational aspirations and subsequent academic achievement. *Social Psychology of Education*, *14*, 209–231.

Rothrauff, T., & Cooney, T. (2008). The role of generativity in psychological well-being: Does it differ for childless adults and parents? *Journal of Adult Development, 15*(3–4), 148–159.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80* (Whole No. 609).

Rotter, J. B. (1982). *The development and applications of social learning theory: Selected papers*. Praeger.

Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. *American Psychologist, 45,* 489–493.

Rotter, J. B. (1993). Expectancies. In C. E. Walker (Ed.), *History of clinical psychology in autobiography* (Vol. 2, pp. 273–284). Brooks/Cole.

Rousseau, A., Frison, E., & Eggermont, S. (2019). The reciprocal relations between Facebook relationship maintenance behaviors and adolescents' closeness to friends. *Journal of Adolescence*, *76*(1), 173–184. https://doi.org/10.1016/j.adolescence.2019.09.001

Roussi-Vergou, C. J., Angelosopoulou, A., & Zafiropoulou, M. M. (2009). Personality characteristics and profiles of Greek elementary teachers using the sixteen personality factor questionnaire (16PF). *International Journal of Adolescent Medicine and Health, 21*(3), 413–420.

Roussi-Vergou, C. J., & Zafiropoulou, M. M. (2011). 16-PF personality characteristics of Greek preschool educators. *Psychology: the Journal of the Hellenic Psychological Society, 18*(2), 211–223.

Routh, D. (2011). Remembering George Kelly. *Clinical Psychologist, 64,* 11–12.

Routledge, C., Ostafin, B., Juhl, J., Sedikides, C., Cathey, C., & Jiangqun, L. (2010). Adjusting to death: The effects of mortality salience and self-esteem on psychological well-being, growth motivation, and maladaptive behavior. *Journal of Personality and Social Psychology, 99*, 897–916.

Rozanski, A., Bavishi, C., Kubzansky, L. D., & Cohen, R. (2019). Association of optimism with cardiovascular events and all-cause mortality. *JAMA Netw Open*, 2(9), e1912200.

Rubins, J. L. (1978). *Karen Horney: Gentle rebel of psychoanalysis*. Dial Press.

Rubio, V. J., Hernández, J. M., Revuelta, J., & Santacreu, J. (2011). Are we more consistent when talking about ourselves than when behaving? Consistency differences through a questionnaire and an objective task. *The Spanish Journal of Psychology*, *14*(1), 207–217.

Rucker, D. D., & Pratkanis, A. R. (2001). Projection as an interpersonal influence tactic: The effects of the pot calling the kettle black. *Personality and Social Psychology Bulletin, 27,* 1494–1507.

Rudolph, K., & Conley, C. (2005). The socioeconomic costs and benefits of social-evaluative concerns: Do girls care too much? *Journal of Personality, 73,* 115–138.

Rudy, D., & Grusec, J. E. (2006). Authoritarian parenting in individualist and collectivist groups: Associations with maternal emotion and cognition and children's self-esteem. *Journal of Family Psychology, 20*(1), 68.

Rumbold, J. L., Madigan, D. J., Murtagh-Cox, A., & Jones, L. (2021). Examining profiles of the Big Five and sensation seeking among competitive climbers. *Psychology of Sport and Exercise*, *55*, 101951.

Russell, J. A., Bachorowski, J. A., & Fernandez-Dols, J. M. (2003). Facial and vocal expressions of emotion. *Annual Review of Psychology, 54,* 329–349.

Russo-Netzer, P., & Shoshani, A. (2020). Authentic inner compass, well-being, and prioritization of positivity and meaning among adolescents. *Personality and Individual Differences*, *167*, 110248.

Rutledge, P. (2013, April 18). The psychology of the selfie: How we connect and thrive through emerging technologies. *Psychology Today Online.* http://www.psychologytoday.com/blog/positively-media/201407/the-psychology-the-selfie

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55,* 68–78.

Ryan, T., & Xenos, S. (2011). Who uses Facebook? An investigation into the relationship between Big Five, shyness, narcissism, loneliness, and Facebook usage. *Computers in Human Behavior, 27,* 1658–1664.

Ryckman, R., Thornton, B., & Gold, J. (2009). Assessing competition avoidance as a basic personality dimension. *Journal of Psychology: Interdisciplinary and Applied, 143*(2), 175–192.

Ryckman, R. M., Hammer, M., Kaczor, L. M., & Gold, J. A. (1990). Construction of a Hypercompetitive Attitude Scale. *Journal of Personality Assessment, 55,* 630–639.

Ryckman, R. M., Thornton, B., & Butler, J. C. (1994). Personality correlates of the Hypercompetitive Attitude Scale: Validity tests of Horney's theory of neurosis. *Journal of Personality Assessment, 62,* 84–94.

Ryckman, R. M., Thornton, B., Gold, J. A., & Burckle, M. A. (2002). Romantic relationships of hypercompetitive individuals. *Journal of Social and Clinical Psychology, 21*(5), 517–530.

Ryon, H., & Gleason, M. (2014). The role of locus of control in daily life. *Personality and Social Psychology Bulletin, 40,* 121–131.

Sacco, D. F., & Brown, M. (2018a). Preferences for facially communicated Big Five personality traits and their relation to self-reported Big Five personality. *Personality and Individual Differences*, *134*, 195–200. https://doi-org.wake.idm.oclc.org/10.1016/j.paid.2018.06.024

Sacco, D. F., & Brown, M. (2018b). The face of personality: Adaptive inferences from facial cues are moderated by perceived personality and motives. *Social and Personality Psychology Compass*, *12*(8), e12410. https://doi.org/10.1111/spc3.12410

Salamon, M. (2011, January 11). For college students, praise may trump sex and money. *Bloomberg Businessweek* (Online edition).

Salas, E., & Cannon-Bowers, J. (2001). The science of training: A decade of progress. *Annual Review of Psychology, 52,* 471–499.

Salas-Vallina, A., Pozo-Hidalgo, M., & Gil-Monte, P. R. (2020). Are happy workers more productive? The mediating role of service-skill use. *Frontiers in Psychology*, *11*, 456. https://doi.org/10.3389/fpsyg.2020.00456

Salem, M. (2014). Commentary on "Spiritual and religious imagery in dreams: A cross-cultural analysis." *International Journal of Dream Research, 7,* 93–94.

Salem, M., Ragab, M., & Abdel, R. (2009). Significance of dreams among United Arab Emirates university students. *International Journal of Dream Research, 2,* 29–33.

Samreen, H., & Zubair, A. (2013). Locus of control and death anxiety among police personnel. *Pakistan Journal of Psychological Research, 28,* 261–275.

Sandhu, T. (2020). Personal growth in middle age: A personality perspective. *Indian Journal of Positive Psychology*, *11*(3), 234–236.

Sapouna, M. (2010). Collective efficacy in the school context: Does it help explain victimization and bullying among Greek primary and secondary school students? *Journal of Interpersonal Violence, 25,* 1912–1927.

Sasson, N., Pinkham, A., Richard, J., Hughett, P., Gur, R., & Gur, R. (2010). Controlling for response biases clarifies sex and age differences in facial affect recognition. *Journal of Nonverbal Behavior, 34,* 207–221.

Satchell, L. P., Bacon, A. M., Firth, J. L., & Corr, P. J. (2018). Risk as reward: Reinforcement sensitivity theory and psychopathic personality perspectives on everyday risk-taking. *Personality and Individual Differences*, *128*, 162–169.

Saudino, K. J., Pedersen, N. L., Lichtenstein, P., McClearn, G. E., & Plomin, R. (1997). Can personality explain genetic influences on life events? *Journal of Personality and Social Psychology, 72,* 196–206.

Saunders, J., Worth, R., Vallath, S., & Fernandes, M. (2014). Retrieval-induced forgetting in repressors: Defensive high anxious, high anxious, and low anxious individuals. *Journal of Experimental Psychopathology, 5,* 97–117.

Savage, J., Collins, D., & Cruickshank, A. (2022). Perspective, control, and confidence: Perceived outcomes of using psycho-behavioural skills in the developmental trauma experience. *International Journal of Sport and Exercise Psychology*, *20*(2), 377–396.

Sayers, J. (1991). *Mothers of psychoanalysis: Helene Deutsch, Karen Horney, Anna Freud, Melanie Klein*. Norton.

Schachter, S. (1963). Birth order, eminence, and higher education. *American Sociological Review, 28,* 757–767.

Schafer, R. (1974/2019). Problems in Freud's psychology of women. *Journal of the American Psychoanalytic Association*, 67(3), 503–526.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological well-being. In E. C. Chang (Ed.), *Pessimism: Implications for theory, research, and practice*. American Psychological Association.

Schimmack, U., & Hartmann, K. (1997). Individual differences in the memory representation of emotional episodes. *Journal of Personality and Social Psychology, 73,* 1064–1079.

Schimmack, U., Oishi, S., Furr, R., & Funder, D. (2004). Personality and life satisfaction: A facet-level analysis. *Personality and Social Psychology Bulletin, 30,* 1062–1075.

Schimmenti, A., Jonason, P. K., Passanisi, A., La Marca, L., Di Dio, N., & Gervasi, A. M. (2019). Exploring the dark side of personality: Emotional awareness, empathy, and the Dark Triad traits in an Italian sample. *Current Psychology*, *38*, 100–109.

Schmidt, A., & DeShon, R. (2010). The moderating effect of performance ambiguity on the relationship between self-efficacy and performance. *Journal of Applied Psychology, 95*(5), 572–581.

Schmitt, D., & Allik, J. (2005). Simultaneous administration of the Rosenberg Self-Esteem Scale in 53 nations: Exploring the universal and culture-specific features

of global self-esteem. *Journal of Personality and Social Psychology, 89*, 632–642.

Schmitt, D., Realo, A., Voracek, M., & Allik, J. (2008). Why can't a man be more like a woman? Sex differences in Big Five personality traits across 55 cultures. *Journal of Personality and Social Psychology, 94,* 168–182.

Schmitt, K., Dayanim, S., & Matthias, S. (2008). Personal homepage construction as an expression of social development. *Developmental Psychology, 44,* 496–506.

Schmitz, N., Neumann, W., & Oppermann, R. (2000). Stress, burnout and locus of control in German nurses. *International Journal of Nursing Studies, 37,* 95–99.

Schmutte, P. S., & Ryff, C. D. (1997). Personality and well-being. *Journal of Personality and Social Psychology, 73,* 549–559.

Schneider, A., & Domhoff, G. (2006). *The quantitative study of dreams*. http//www.dreamresearch.net/

Schneider, G., Dreisch, G., Kruse, A., Nehen, H., & Heuft, G. (2006). Old and ill and still feeling well? Determinants of subjective well-being in 60-year-olds: The role of the sense of coherence. *American Journal of Geriatric Psychiatry, 14,* 850–859.

Schneider, S. (2001). In search of realistic optimism: Meaning, knowledge, and warm fuzziness. *American Psychologist, 56,* 250–263.

Schou, I., Ekeberg, O., Ruland, C., Sandvik, L., & Karesen, R. (2004). Pessimism as a predictor of emotional morbidity one year following breast cancer surgery. *Psycho-Oncology, 13,* 309–320.

Schou, I., Ekeberg, O., Sandvik, L., & Ruland, C. (2005). Stability in optimism-pessimism in relation to bad news: A study of women with breast cancer. *Journal of Personality Assessment, 84,* 148–154.

Schredl, M. (2006). Factors affecting the continuity between waking and dreaming: Emotional intensity and emotional tone of the waking-life event. *Sleep and Hypnosis, 8,* 1–5.

Schredl, M. (2010a). Explaining the gender difference in dream recall frequency. *Dreaming, 20*(2), 96–106.

Schredl, M. (2010b). Reading books about dream interpretation: Gender differences. *Dreaming, 20*(4), 248–253.

Schredl, M., Funkhouser, A., & Arn, N. (2006). Dreams of truck drivers: A test of the continuity hypothesis of dreaming. *Imagination, Cognition, and Personality, 25,* 179–186.

Schredl, M., & Piel, E. (2006). War-related dream themes in Germany from 1956 to 2000. *Political Psychology, 27,* 299–307.

Schroeder, J., & Epley, N. (2020). Demeaning: Dehumanizing others by minimizing the importance of their psychological needs. *Journal of Personality and Social Psychology*, *119*(4), 765–791. https://doi.org/10.1037/pspa0000199

Schueller, S., & Seligman, M. (2010). Pursuit of pleasure, engagement, and meaning: Relationships to subjective and objective measures of well-being. *Journal of Positive Psychology, 5*(4), 253–263.

Schul, Y., & Vinokur, A. D. (2000). Projection in person perception among spouses as a function of the similarity in their shared experiences. *Personality and Social Psychology Bulletin, 26,* 987–1001.

Schulman, P. (1999). Applying learned optimism to increase sales productivity. *Journal of Personal Selling & Sales Management*, *19*(1), 31–37.

Schultz, D. P. (1990). *Intimate friends, dangerous rivals: The turbulent relationship between Freud and Jung*. Jeremy Tarcher.

Schumpe, B. M., Bélanger, J. J., Moyano, M., & Nisa, C. F. (2020). The role of sensation seeking in political violence: An extension of the Significance Quest Theory. *Journal of Personality and Social Psychology*, *118*(4), 743.

Schunk, D. H., & Zimmerman, B. J. (1997). Social origins of self-regulatory competence. *Educational Psychologist*, *32*(4), 195–208.

Schur, M. (1972). *Freud: Living and dying*. New York: International Universities Press.

Schwaba, T., Robins, R. W., Sanghavi, P. H., & Bleidorn, W. (2019). Optimism development across adulthood and associations with positive and negative life events. *Social Psychological and Personality Science, 10*(8), 1092–1101.

Schwartz, S., Forthun, L., Ravert, R., Zamboanga, B. L., Umaña-Taylor, A. J., Filton, B. J., Kim, S. Y., Rodriguez, L., Weisskirch, R. S., Vernon, M., Shneyderman, Y., Williams, M. K., Agocha, V. B., & Hudson, M. (2010). Identity consolidation and health risk behaviors in college students. *American Journal of Health Behavior, 34(2),* 214–224.

Schwartz, S., Mason, C., Pantin, H., & Szapocznik, J. (2008). Effect of family functioning and identity confusion on substance use and sexual behavior in Hispanic immigrant early adolescents. *Identity: An International Journal of Theory and Research, 8,* 107–124.

Schwartz, S. J., Hardy, S. A., Zamboanga, B. L., Meca, A., Waterman, A. S., Picariello, S., Luyckx, K., Crocetti, E., Kim, S. Y., Brittian, A. S., Roberts, S. E., Whitbourne, S. K., Ritchie, R. A., Brown, E. J., & Forthun, L. F. (2015). Identity in young adulthood: Links with mental health and risky behavior. *Journal of Applied Developmental Psychology*, *36*, 39–52.

Schwarzer, R., & Fuchs, R. (1995). Changing risk behaviors and adopting health behaviors: The role of self-efficacy beliefs. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 259–315). Cambridge University Press.

Schwery, D., Hulac, D., & Schweinle, A. (2016, December). Understanding the Gender Gap in Mathematics Achievement: The Role of Self-Efficacy and Stereotype Threat. In *School Psychology Forum* (Vol. 10, No. 4).

Schwitzgebel, E., Huang, C., & Zhou, Y. (2006). Do we dream in color? Cultural variations and skepticism. *Dreaming, 16,* 35–42.

Scoffier, S., Paquet, Y., & d'Arripe-Longeuville, F. (2010). Effects of locus of control on disordered eating in athletes: The mediational role of self-regulation of eating attitudes. *Eating Behaviors, 11*(3), 164–169.

Scollon, C., & Diener, E. (2006). Love, work, and changes in extraversion and neuroticism over time. *Journal of Personality and Social Psychology, 91,* 1152–1165.

Scollon, C., Kim-Prieto, C., & Diener, E. (2009). Experience sampling: Promises and pitfalls, strengths and weaknesses. In E. Diener (Ed.), *Assessing well-being: The collected works of Ed Diener* (pp. 157–180). U.S. Springer Science.

Scott, R., & Dienes, Z. (2010). Knowledge applied to new domains: The unconscious succeeds where the conscious fails. *Consciousness and Cognition, 29,* 391–398.

Scott-Johnson, P. E., & Leggett-Robinson, P. M. (2020). A journey worth traveling: Mentoring and role models matter. In *Overcoming barriers for women of color in STEM fields: Emerging research and opportunities* (pp. 116–140). IGI Global.

Seaton, C. (2014). The role of positive emotions and ego resilience in personal strivings. *Dissertation Abstracts International. Section B: Sciences and Engineering. Vol. 74 (10-BE).*

Seaton, E., Caldwell, C., Sellers, R., & Jackson, J. (2010). An intersectional approach for understanding perceived discrimination and psychological well-being among African American and Caribbean Black youth. *Developmental Psychology, 4,* 1372–1379.

Seaton, E., & Yip, T. (2009). School and neighborhood contexts, perceptions of racial discrimination, and psychological wellbeing among African American adolescents. *Journal of Youth and Adolescence, 38,* 153–163.

Sechrest, L. (1968). Personal constructs and personal characteristics. *Journal of Individual Psychology, 24,* 162–166.

Sechrest, L., & Jackson, D. N. (1961). Social intelligence and accuracy of interpersonal predictions. *Journal of Personality, 29,* 169–182.

Seedall, R. B., Butler, M. H., & Elledge, J. Z. (2014). Does religious motivation influence the conceptualization and acceptability of forgiveness as a therapeutic intervention? *The American Journal of Family Therapy*, 42(2), 127–140.

Seeman, M., Seeman, T., & Sayles, M. (1985). Social networks and health status: A longitudinal analysis. *Social Psychology Quarterly, 48,* 237–248.

Segall, M., & Wynd, C. A. (1990). Health conception, health locus of control, and power as predictors of smoking behavior change. *American Journal of Health Promotion, 4,* 338–344.

Segers, E., Beckers, T., Geurts, H., Claes, L., Danckaerts, M., & Van der Oord, S. (2018). Working memory and reinforcement schedule jointly determine reinforcement learning in children: Potential implications for behavioral parent training. *Frontiers in Psychology, 9*, 394.

Segerstrom, S. C. (2001). Optimism and attentional bias for negative and positive stimuli. *Personality and Social Psychology Bulletin, 27,* 1334–1343.

Segerstrom, S. C., & Taylor, S. E. (1998). Optimism is associated with mood, coping, and immune change in response to stress. *Journal of Personality and Social Psychology, 74,* 1646–1655.

Seidah, A., & Bouffard, T. (2007). Being proud of oneself as a person or being proud of one's physical appearance: What matters for feeling well in adolescence? *Social Behavior and Personality, 35,* 255–268.

Seidman, G. (2014). Expressing the true self on Facebook. *Computers in Human Behavior, 31,* 367–372.

Seiffge-Krenke, I., & Kirsch, H. (2002). The body in adolescent diaries: The case of Karen Horney. *Psychoanalytic Study of the Child, 57,* 400–410.

Seligman, M. E. (2006). *Learned optimism: How to change your mind and your life*. Vintage.

Seligman, M. E., & Schulman, P. (1986). Explanatory style as a predictor of productivity and quitting among life insurance sales agents. *Journal of Personality and Social Psychology, 50*(4), 832–838.

Seligman, M. E. P. (1975). *Helplessness: On depression, development, and death.* W. H. Freeman.

Seligman, M. E. P. (1990). *Learned optimism*. Knopf.

Seligman, M. E. P. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. Free Press.

Seligman, M. E. P., & Fowler, R. (2011). Comprehensive soldier fitness and the future of psychology. *American Psychologist, 66*(1), 81–86.

Seligman, M. E. P., & Maier, S. F. (1967). Failure to escape traumatic shock. *Journal of Experimental Psychology, 74,* 1–9.

Seligman, M. E. P., Rashid, T., & Parks, A. (2006). Positive psychotherapy. *American Psychologist, 61,* 774–788.

Seligman, M. E. P., & Visintainer, M. (1985). Tumor rejection and early experience of uncontrollable shock in the rat. In F. R. Brush & J. B. Overmier (Eds.), *Affect, conditioning, and cognition: Essays on the determinants of behavior* (pp. 203–210). Erlbaum.

Seon, Y., Swank, J. M., & Smith-Adcock, S. (2021). A social interest–activity typology of bystander behavior in school bullying. *The Journal of Individual Psychology, 77*(1), 24–39.

Settineri, S., Frisone, F., Alibrandi, A., Pino, G., Lupo, N. J., & Merlo, E. M. (2018). Psychological types and learning styles. *Mediterranean Journal of Clinical Psychology*, *6*(3).

Setyawan, I., & Masykur, A. M. (2022). The effectiveness of "Navigasi Diri": Smart internet self-regulation-based Intervention on Internet addiction in adolescents. *Jurnal Psikologi*, *21*(1), 51–61.

Shadach, E., Rappaport, S., Dollberg, D., Tolmacz, R., & Levy, S. (2018). Relational entitlement, early recollections of parental care, and attachment orientation. *Current Psychology*, *37*, 781–791.

Shallcross, A., Ford, B., Floerke, C., & Mauss, I. (2013). Getting better with age: The relationship between age, acceptance, and negative affect. *Journal of Personality and Social Psychology, 104,* 734–748.

Shamir, B. (1986). Self-esteem and the psychological impact of unemployment. *Social Psychology Quarterly, 49,* 61–72.

Shane, S., Nicolaou, N., Cherkas, L., & Spector, T. (2010). Genetics, the Big Five and the tendency to be self-employed. *Journal of Applied Psychology, 95*(6), 1154–1162.

Shankar, A., McMunn, A., Demakakos, P., Hamer, M., & Steptoe, A. (2017). Social isolation and loneliness: Prospective associations with functional status in older adults. *Health Psychology*, *36*(2), 179.

Sharot, T., Korn, C. W., & Dolan, R. J. (2011). How unrealistic optimism is maintained in the face of reality. *Nature Neuroscience*, *14*(11), 1475–1479.

Shatz, S. (2004). The relationship between Horney's three neurotic types and Eysenck's PEN model of personality. *Personality and Individual Differences, 37,* 1255–1261.

Shaw, B., Liang, J., & Krause, N. (2010). Age and race differences in the trajectories of self-esteem. *Psychology and Aging, 25*(1), 84–94.

Sheldon, K., Abad, N., & Omoile, J. (2009). Testing self-determination theory via Nigerian and Indian adolescents. *International Journal of Behavioral Development, 33*(5)*,* 451–459.

Sheldon, K., Arndt, J., & Houser-Marko, L. (2003). In search of the organismic valuing process: The human tendency to move towards beneficial goal choices. *Journal of Personality, 71,* 835–886.

Sheldon, K., Elliot, A., Kim, Y., & Kasser, T. (2001). What is satisfying about satisfying events? Testing ten candidate psychological needs. *Journal of Personality and Social Psychology, 80,* 325–339.

Sheldon, K., & Kasser, T. (2001). Getting older, getting better? Personal strivings and psychological maturity across the life span. *Developmental Psychology, 37,* 491–501.

Sheldon, K., Kasser, T., Houser-Marko, L., Jones, T., & Turban, D. (2005). Doing one's duty: Chronological age, felt autonomy, and subjective well-being. *European Journal of Personality, 19,* 97–115.

Sheldon, K. M. (2014). Becoming oneself: The central role of self-concordant goal selection. *Personality and Social Psychology Review*, *18*(4), 349–365.

Sheldon, K. M., & Kasser, T. (2001). Getting older, getting better? Personal strivings and psychological maturity across the life span. *Developmental Psychology*, *37*(4), 491.

Sheldon, W. (1942). *The varieties of temperament: A psychology of constitutional differences.* Harper & Row.

Shen, J., Han, S., Zhou, Y., Li, S., Gan, Y., Huang, H., Xu, Q., & Zhang, L. (2023). The influence of facial attractiveness and personal characteristics on imitation. *The Journal of Social Psychology*, *163*(1), 94–106.

Shepherd, S., & Belicki, K. (2008). Trait forgiveness and traitedness with the HEXACO model of personality. *Personality and Individual Differences, 45,* 389–394.

Sher, K., Bartholow, B., & Wood, M. (2000). Personality and substance abuse disorders: A prospective study. *Journal of Consulting and Clinical Psychology, 68,* 818–829.

Sherlock, M., & Wagstaff, D. L. (2019). Exploring the relationship between frequency of Instagram use, exposure to idealized images, and psychological well-being in women. *Psychology of Popular Media Culture*, *8*(4), 482–490. https://doi.org/10.1037/ppm0000182

Shevrin, H. (1977). Some assumptions of psychoanalytic communication: Implications of subliminal research for psychoanalytic method and technique. In N. Freedman (Ed.), *Communicative structures and psychic structures* (pp. 255–270). New York: Springer.

Shi, B., Dai, D. Y., & Lu, Y. (2016). Openness to experience as a moderator of the relationship between intelligence and creative thinking: A study of Chinese children in urban and rural areas. *Frontiers in Psychology*, *7*. https://doi.org/10.3389/fpsyg.2016.00641

Shiner, R. L. (1998). How shall we speak of children's personalities in middle childhood? A preliminary taxonomy. *Psychological Bulletin, 124,* 308–332.

Shiner, R. L., Masten, A. S., & Tellegen, A. (2002). A developmental perspective on personality in emerging adulthood: Childhood antecedents and concurrent adaptation. *Journal of Personality and Social Psychology, 83*(5), 1165.

Shkalim, E., Ben-Porath, Y. S., Handel, R. W., Almagor, M., & Tellegen, A. (2016). Psychometric examination, adaptation, and evaluation of the Hebrew translation of the MMPI–2–RF VRIN-r and TRIN-r validity scales. *Journal of Personality Assessment, 98*(6), 608–615.

Shojaee, M., & French, C. (2014). The relationship between mental health components and locus of control in youth. *Psychology, 5,* 966–978.

Shostrom, E. L. (1964). An inventory for the measurement of self-actualization. *Educational and Psychological Measurement, 24,* 207–218.

Shostrom, E. L. (1974). *Manual for the Personal Orientation Inventory*. Educational and Industrial Testing Service.

Shostrom, E. L., & Knapp, R. R. (1966). The relationship of a measure of self-actualization (POI) to a measure of pathology (MMPI) and to therapeutic growth. *American Journal of Psychotherapy*, *20*(1), 193–202.

Shull, R., & Grimes, J. (2006). Resistance to extinction following variable-interval reinforcement. *Journal of the Experimental Analysis of Behavior, 85,* 23–29.

Shulman, E. P., Harden, K. P., Chein, J. M., & Steinberg, L. (2015). Sex differences in the developmental trajectories of impulse control and sensation-seeking from early adolescence to early adulthood. *Journal of Youth and Adolescence*, *44*, 1–17. https://doi.org/10.1007/s10964-014-0116-9

Shutts, K., Banaji, M. R., & Spelke, E. S. (2010). Social categories guide young children's preferences for novel objects. *Developmental Science, 13*, 599–610. https://doi.org/10.1111/j.1467-7687.2009.00913.x

Sibley, C., Harding, J., Perry, R., Asbrock, F., & Duckitt, J. (2010). Personality and prejudice: Extension to the HEXACO personality model. *European Journal of Personality, 24,* 515–534.

Siegler, I., & Brummett, B. (2000). Associations among NEO personality assessments and well-being at midlife: Facet level analysis. *Psychology and Aging, 15,* 710–714.

Silvera, D., & Seger, C. (2004). Feeling good about ourselves: Unrealistic self-evaluations and their relation to self-esteem in the United States and Norway. *Journal of Cross-Cultural Psychology, 35,* 571–585.

Silverman, L. H., & Weinberger, I. (1985). Mommy and I are one: Implications for psychotherapy. *American Psychologist, 40,* 1296–1308.

Silverman, W. K., Rey, Y., Marin, C. E., Jaccard, J., & Pettit, J. W. (2022). Does training parents in reinforcement skills or relationship skills enhance individual youths' cognitive behavioral therapy for anxiety? Outcome, specificity, and mediation. *Clinical Psychological Science, 10*(2), 355–373.

Sim, Z. L., & Xu, F. (2017). Learning higher-order generalizations through free play: Evidence from 2- and 3-year-old children. *Developmental Psychology, 53*(4), 642–651. https://doi.org/10.1037/dev0000278

Simeon, I., Abdullahi, M. I., & Umaru, Y. (2015). Efficacy of token economy-technique in reducing lateness behaviour among primary school pupils in Kaduna Metopolis, Nigeria. *Journal of Sociology, Psychology and Anthropology in Practice*, *7*(3).

Simon, A. (2007). Sensitivity of the 16PF Motivational Distortion Scale to response bias. *Psychological Reports, 101,* 482–484.

Simpson, J. A., Griskevicius, V., Kuo, S. I., Sung, S., & Collins, W. A. (2012). Evolution, stress, and sensitive periods: The influence of unpredictability in early versus late childhood on sex and risky behavior. *Developmental Psychology*, *48*(3), 674–686. https://doi.org/10.1037/a0027293

Simpson, J. A., Kim, J. S., Fillo, J., Ickes, W., Rholes, W. S., Oriña, M. M., & Winterheld, H. A. (2011). Attachment and the management of empathic accuracy in relationship-threatening situations. *Personality and Social Psychology Bulletin*, 37(2), 242–254.

Singh, D. C., & Singh, D. G. (2022). Measuring the impact of ego strength among type 2 diabetes. *Journal of Positive School Psychology*, 5940–5953.

Singh, N. (2016). Correlational analysis of self-regulation and self-efficacy with the individuation process among adults. *International Journal of Indian Psychology, 3*(3), No. 10, 66.

Singh, T., & Choudhri, N. (2014). Early adulthood: The role of locus of control, meaning of life and subjective well being. *Journal of Psychosocial Research, 9,* 131–139.

Siraji, M. A., & Haque, S. (2022). Psychometric evaluation of the Bangla-Translated Rotter's Internal-External Scale through classical test theory and item response theory. *Frontiers in Psychology*, *13*.

Siribaddana, P. (2013). Personality traits of the only child, *Sciences 360*. http://www.sciences360.com/index.php/personality-traits-of-the-only-child-3045/

Skinner, A. L., Olson, K. R., & Meltzoff, A. N. (2020). Acquiring group bias: Observing other people's nonverbal signals can create social group biases. *Journal of Personality and Social Psychology*, *119*(4), 824.

Skinner, B. F. (1938). *The behavior of organisms: An experimental analysis*. Appleton-Century.

Skinner, B. F. (1948). *Walden two*. Macmillan.

Skinner, B. F. (1953). *Science and human behavior*. Free Press.

Skinner, B. F. (1958). Distinguished scientific contribution award. *American Psychologist, 13,* 729–738.

Skinner, B. F. (1967). Autobiography. In E. G. Boring & G. Lindzey (Eds.), *A history of psychology in autobiography* (Vol. 5, pp. 385–413). Appleton-Century-Crofts.

Skinner, B. F. (1971). *Beyond freedom and dignity*. Knopf.

Skinner, B. F. (1979). *The shaping of a behaviorist*. Knopf.

Skinner, B. F. (1983). *A matter of consequences*. Knopf.

Skinner, T., Hampson, S., & Fife-Schau, C. (2002). Personality, personal model beliefs, and self-care in adolescents and young adults with Type I diabetes. *Health Psychology, 21,* 61–70.

Slugoski, B. F., & Ginsburg, G. P. (1989). Ego identity and explanatory speech. In J. Shotter & K. F. Gergen (Eds.), *Texts of identity* (pp. 36–55). Sage.

Smaldino, P. E., Lukaszewski, A., von Rueden, C., & Gurven, M. (2019). Niche diversity can explain cross-cultural differences in personality structure. *Nature Human Behaviour*, *3*(12), 1276–1283.

Smeekens, S., Riksen-Walraven, J., & van Bakel, H. (2007). Cortisol reactions in five-year-olds to parent-child interaction: The moderating role of ego-resiliency. *Journal of Child Psychology and Psychiatry, 48,* 649–656.

Śmieja, M., & Stolarski, M. (2018). Assortative mating for emotional intelligence. *Current Psychology*, *37*(1), 180–187.

Smillie, L., Yeo, G., Furnham, A., & Jackson, C. (2006). Benefits of all work and no play: The relationship between neuroticism and performance as a function of resource allocation. *Journal of Applied Psychology, 91,* 139–155.

Smith, A., & Williams, K. (2004). R U there? Ostracism by cell phone text messages. *Group Dynamics, 8,* 291–301.

Smith, D. J., Escott-Price, V., Davies, G., Bailey, M. E., Colodro-Conde, L., Ward, J., Vedernikov, A., Marioni, R., Cullen, B., Lyall, D., Hagenaars, S. P., Liewald, D. C. M., Luciano, M., Gale, C. R., Ritchie, S. J., Hayward, C., Nicholl, B., Bulik-Sullivan, B., Adams, M., . . . O'Donovan, M. C. (2016). Genome-wide analysis of over 106 000 individuals identifies 9 neuroticism-associated loci. *Molecular Psychiatry*, *21*(6), 749–757.

Smith, E., Bissett, D., & Russo, S. (2014). *Sensation seeking tendencies and injury patterns among Motocross athletes.* American Psychological Association Convention Presentation. http://psycnet.apa.org/index.cfm?fa=search.displayRecord&id=4CA4E0D5-F108-6F39-DFA8-567CF9EEAAEB &resultID=1 &page=1 &dbT at=all&search=true

Smith, J. E., Stefan, C., Kovaleski, M., & Johnson, G. (1991). Recidivism and dependency in a psychiatric population:

An investigation with Kelly's dependency grid. *International Journal of Personal Construct Psychology, 4,* 157–173.

Smith, J. M. (1998). *Evolutionary genetics*. Oxford University Press.

Smith, T. B., & Silva, L. (2011). Ethnic identity and personal wellbeing of people of color: A meta-analysis. *Journal of Counseling Psychology, 58,* 42–60.

Smith-Lee, E. E. (1996). Recovered memories of childhood abuse: Should long-buried memories be admissible testimony. *Boston College Law Review*, *37(3)*, 591.

Sobol-Kwapińska, M., Sobol, M., & Woźnica-Niesobska, E. (2020). Parental behavior and child distress and pain during pediatric medical procedures: Systematic review and meta-analysis. *Health Psychology*, *39*(7), 558.

Sohlberg, S., Birgegard, A., Czartoryski, W., Ovefelt, K., & Strömbom, Y. (2000). Symbiotic oneness and defensive autonomy: Yet another experiment demystifying Silverman's findings using "MOMMY AND I ARE ONE." *Journal of Research in Personality*, *34*(1), 108–126.

Solanki, S. M., & Xu, D. (2018). Looking beyond academic performance: The influence of instructor gender on student motivation in STEM fields. *American Educational Research Journal*, *55*(4), 801–835.

Solnit, A. J. (1992). Freud's view of mental health and fate. In E. E. Garcia (Ed.), *Understanding Freud: The Man and His Ideas* (pp. 64–77). New York: New York University Press.

Solo, C. (2015). Is happiness good for your personality? Concurrent and prospective relations to the Big Five with subjective well-being. *Journal of Personality, 83,* 45–55.

Song, E. A., Heo, M. S., An, H. J., & Choi, J. S. (2017). Influence of emotional labor, nursing work environment, and self-efficacy on happiness index among national psychiatric hospital nurses in Korea. *Journal of Korean Academy of Psychiatric and Mental Health Nursing*, *26*(1), 46–54.

Soni, A., Bhalla, A., & Kaur, B. (2020). To study the predictors of happiness on locus of control and gratitude among adolescents. *Indian Journal of Positive Psychology*, *11*(4), 398–401.

Sorrenti, L., Filippello, P., Buzzai, C., Buttò, C., & Costa, S. (2018). Learned helplessness and mastery orientation: The contribution of personality traits and academic beliefs. *Nordic Psychology*, *70*(1), 71–84.

Sorrenti, L., Spadaro, L., Mafodda, A. V., Scopelliti, G., Orecchio, S., & Filippello, P. (2019). The predicting role of school learned helplessness in internalizing and externalizing problems. An exploratory study in students with specific learning disorder. *Mediterranean Journal of Clinical Psychology*, *7*(2).

Soto, C. J. (2015). Is happiness good for your personality? Concurrent and prospective relations of the Big Five with subjective well-being. *Journal of Personality*, *83*(1), 45–55.

South, S. C., Jarnecke, A. M., & Vize, C. E. (2018). Sex differences in the Big Five model personality traits: A behavior genetics exploration. *Journal of Research in Personality*, *74*, 158–165.

Spann, M., Molock, S., Barksdale, C., Matlin, S., & Puri, R. (2006). Suicide and African-American teenagers: Risk factors and coping mechanisms. *Suicide and Life-Threatening Behavior, 36,* 553–568.

Specht, J., Luhmann, M., & Geiser, C. (2014). On the consistency of personality types across adulthood: Latent profile analyses in two large-scale panel studies. *Journal of Personality and Social Psychology*, *107*(3), 540.

Spitalnick, J., DiClemente, R., Wingood, G., Crosby, R., Milhausen, R., Sales, J., McCarty, F., Rose, E., & Younge, S. N. (2007). Sexual sensation seeking and its relationship to risky sexual behavior among African-American adolescents. *Journal of Adolescence, 30,* 165–173.

Spurk, D., Keller, A. C., & Hirschi, A. (2016). Do bad guys get ahead or fall behind? Relationships of the dark triad of personality with objective and subjective career success. *Social Psychological and Personality Science*, *7*(2), 113–121. https://doi.org/10.1177/1948550615609735

Spyridaki, E., & Galanakis, M. (2022). Locus of control theory, productivity, job satisfaction, and procrastination: A systematic literature review in the organizational context of the 21st century. *Psychology, 12*(12), 965–970. https://doi.org/10.17265/2159-5542/2022.12.008

Srivastava, S., John, O. P., Gosling, S. D., & Potter, J. (2003). Development of personality in early and middle adulthood: Set like plaster or persistent change? *Journal of Personality and Social Psychology, 84*(5), 1041.

Sroufe, L. A., Fox, N. E., & Pancake, V. R. (1983). Attachment and dependency in developmental perspective. *Child Development, 54,* 1615–1627.

Stacy, A. W., Sussman, S., Dent, C. W., Burton, D., & Floy, B. R. (1992). Moderators of peer social influence in adolescent smoking. *Personality and Social Psychology Bulletin, 18,* 163–172.

Stajkovic, A. D., Bandura, A., Locke, E. A., Lee, D., & Sergent, K. (2018). Test of three conceptual models of influence of the big five personality traits and self-efficacy on academic performance: A meta-analytic path-analysis. *Personality and Individual Differences*, *120*, 238–245.

Stajkovic, A., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin, 124,* 240–261.

Stanaland, A., & Gaither, S. (2021). "Be a man": The role of social pressure in eliciting men's aggressive cognition. *Personality and Social Psychology Bulletin*, *47*(11), 1596–1611.

Stanton, B., Li, X., Cottrell, L., & Kaljee, J. (2001). Early initiation of sex, drug-related risk behaviors, and sensation seeking among urban low-income African-American adolescents. *Journal of the National Medical Association, 93*(4), 129–138.

Statton, J. E., & Wilborn, B. (1991). Adlerian counseling and the early recollections of children. *Individual Psychology, 47,* 338–347.

Staudinger, U. M. (2001a). Life reflection: A social-cognitive analysis of life review. *Review of General Psychology, 5,* 148–160.

Staudinger, U. M. (2001b). More than pleasure? Toward a psychology of growth and strength? [Review of the book *Wellbeing: The foundations of hedonic psychology*]. *Contemporary Psychology, 46,* 552–554.

Staudinger, U. M., Fleeson, W., & Baltes, P. B. (1999). Predictors of subjective physical health and global well-being: Similarities and differences between the United States and Germany. *Journal of Personality and Social Psychology, 76,* 305–319.

Stavrova, O., Ren, D., & Pronk, T. (2022). Low self-control: A hidden cause of loneliness? *Personality and Social Psychology Bulletin*, *48*(3), 347–362.

Steca, P., Bassi, M., Caprara, V., & Fave, A. (2011). Parents' self-efficacy beliefs and their children's psychosocial adaptation during adolescence. *Journal of Youth and Adolescence, 40,* 320–331.

Steel, P., & Ones, D. S. (2002). Personality and happiness: A national-level analysis. *Journal of Personality and Social Psychology, 83*(3), 767.

Steel, P., Taras, V., Uggerslev, K., & Bosco, F. (2018). The happy culture: A theoretical, meta-analytic, and empirical review of the relationship between culture and wealth and subjective well-being. *Personality and Social Psychology Review, 22*(2), 128–169.

Steinberg, L., Icenogle, G., Shulman, E. P., Breiner, K., Chein, J., Bacchini, D., Chang, L., Chaudhary, N., Di Giunta, L., Dodge, K. A., Fanti, K. A., Lansford, J. E., Malone, P. S., Oburu, P., Pastorelli, C., Skinner, A. T., Sorbring, E., Tapanya, S., Tirado, L. M. U., . . . Takash, H. M. (2018). Around the world, adolescence is a time of heightened sensation seeking and immature self-regulation. *Developmental Science*, *21*(2), e12532.

Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology, 52,* 83–110.

Stein, R., & Swan, A. B. (2019). Evaluating the validity of Myers-Briggs Type Indicator Theory: A teaching tool and window into intuitive psychology. *Social and Personality Psychology Compass, 13*(2). https://doi.org/10.1111/spc3.12434

Steinke, J., Applegate, B., Penny, J. R., & Merlino, S. (2021). Effects of diverse STEM role model videos in promoting adolescents' identification. *International Journal of Science and Mathematics Education*, 1–22.

Stelmack, R. M. (1997). Toward a paradigm in personality: Comment on Eysenck's (1997) view. *Journal of Personality and Social Psychology, 73,* 1238–1241.

Stepanikova, I., Nie, N., & He, X. (2010). Time on the Internet at home, loneliness, and life satisfaction: Evidence from panel time-diary data. *Computers in Human Behavior, 26,* 329–338.

Stepansky, P. E. (1983). *In Freud's shadow: Adler in context.* Analytic Press.

Stephen, J., Fraser, E., & Marcia, J. E. (1992). Moratorium achievement (MAMA) cycles in lifespan identity development: Value orientations and reasoning system correlates. *Journal of Adolescence, 15,* 283–300.

Stephan, J., Schredl, M., Henley-Einion, J., & Blagrove, M. (2012). TV viewing and dreaming in children: The UK library study. *International Journal of Dream Research, 5,* 130–133.

Stephan, Y., Boiche, J., & Le Scanff, C. (2010). Motivation and physical activity behaviors among older women: A self-determination perspective. *Psychology of Women Quarterly, 34,* 339–348.

Steptoe, A., Deaton, A., & Stone, A. (2015). Subjective wellbeing, health, and aging. *Lancet, 385,* 640–648.

Steptoe, A., Wright, C., Kunz-Ebrecht, S., & Lliffe, S. (2006). Dispositional optimism and health behavior in community-dwelling older people: Associations with healthy aging. *British Journal of Health Psychology, 11,* 71–84.

Sterba, R. F. (1982). *Reminiscences of a Viennese psychoanalyst.* Wayne State University Press.

Stewart, G. L., Carson, K. P., & Cardy, R. L. (1996). The joint effects of conscientiousness and self-leadership training on employee self-directed behavior in a service setting. *Personnel Psychology, 49,* 143–164.

Stewart, R. A. (2014). Obituary-Julian B. Rotter. *Social Behavior and Personality, 42*(1), 1–2.

Stieger, S., & Reips, U. (2010). What are participants doing while filling in an online questionnaire: A paradata collection tool and an empirical study. *Computers in Human Behavior, 26,* 1488–1495.

Stilwell, N. A., Wallick, M. M., Thal, S. E., & Burleson, J. A. (2000). Myers-Briggs Type and medical specialty choice: A new look at an old question. *Teaching and Learning in Medicine, 12,* 14–20.

Stinson, D., Logel, C., Cameron, J., Zanna, M., Holmes, J., Wood, J., & Spencer, S. (2008). The cost of lower self-esteem: Testing a self-and social-bonds model of health. *Interpersonal Relations and Group Processes, 94,* 412–428.

Stojek, M. M., & MacKillop, J. (2017). Relative reinforcing value of food and delayed reward discounting in obesity and disordered eating: A systematic review. *Clinical Psychology Review, 55,* 1–11.

Stone, A. A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. *Proceedings of the National Academy of Sciences, 107*(22), 9985–9990.

Storage, D., Horne, Z., Cimpian, A., & Leslie, S. J. (2016). The frequency of "brilliant" and "genius" in teaching evaluations predicts the representation of women and African Americans across fields. *PLoS One*, *11*(3), e0150194.

Stout, J. G., Dasgupta, N., Hunsinger, M., & McManus, M. A. (2011). STEMing the tide: Using ingroup experts to inoculate women's self-concept in science, technology, engineering, and mathematics (STEM). *Journal of Personality and Social Psychology*, *100*(2), 255.

Strano, D., & Petrocelli, J. (2005). A preliminary examination of the role of inferiority feelings in the academic achievement of college students. *Journal of Individual Psychology, 61,* 80–89.

Streitmatter, J. (1993). Identity status and identity style: A replication study. *Journal of Adolescence, 16,* 211–215.

Stricker, L. J., & Ross, J. (1962). *A description and evaluation of the Myers-Briggs Type Indicator*. Educational Testing Service.

Strickhouser, J. E., Zell, E., & Krizan, Z. (2017). Does personality predict health and well-being? A metasynthesis. *Health Psychology*, *36*(8), 797.

Strickland, B. R. (1989). Internal-external control expectancies: From contingency to creativity. *American Psychologist, 44,* 1–12.

Strickland, B. R. (2014). Julian B. Rotter (1916–2014) [obituary]. *American Psychologist, 69,* 545–546.

Strizhitskaya, O., & Davedyuk, E. (2014). Self-determination structure in aging: From theory to practice. *3rd Annual International Conference on Cognitive and Behavioral Psychology.* http://psycnet.apa.org/psycextra/507412014-012.pdf

Stuewig, J., Tangney, J. P., Kendall, S., Folk, J. B., Meyer, C. R., & Dearing, R. L. (2015). Children's proneness to shame and guilt predict risky and illegal behaviors in young adulthood. *Child Psychiatry & Human Development*, *46*, 217–227. https://doi.org/10.1007/s10578-014-0467-1

Suarez-Balcazar, Y., Balcazar, F., & Taylor-Ritzler, T. (2009). Using the Internet to conduct research with culturally diverse populations: Challenges and opportunities. *Cultural Diversity and Ethnic Minority Psychology, 15,* 96–103.

Suinn, R. (1999, March). Scaling the summit: Valuing ethnicity. *APA Monitor,* p. 2.

Suldo, S., Minch, D., & Hearon, B. (2014). Adolescent life satisfaction and personality characteristics: Investigating relationships using a five-factor model. *Journal of Happiness Studies.* http://link.springer.com/article/10.1007/s10902-014-9544-1http://link.springer.com/article/10.1007/s10902-014-9544-1

Sulloway, F. J. (1979). *Freud, biologist of the mind: Beyond the psychoanalytic legend*. New York: Basic Books.

Sulloway, F. J. (1992). Reassessing Freud's case histories: The social construction of psychoanalysis. In T. Gelfand & J. Kerr (Eds.), *Freud and the history of psychoanalysis* (pp. 153–192). Hillsdale, NJ: Analytic Press.

Sulloway, F. J. (1995). Birth order and evolutionary psychology: A meta-analytic overview. *Psychological Inquiry, 6*(1), 75–80.

Sulloway, F. J., & Zweigenhaft, R. (2010). Birth order and risk taking in athletics: A meta-analysis and study of major league baseball. *Personality and Social Psychology Review, 14,* 402–416.

Sultan, S., & Hagger, M. (2014). Attributional complexity: A required constituent for social competence among students. *Pakistan Journal of Social Sciences*, *34*(1), 131–138.

Summerville, K. (2010). *Antagonism of opposites: Carl Jung's legacy of analytic psychology*. American Psychological Association Convention Presentation.

Sun, P., & Anderson, M. (2012). The importance of attributional complexity for transformational leadership studies. *Journal of Management Studies, 48,* 1001–1022.

Sutil-Martín, D. L., & Rienda-Gómez, J. J. (2020). The influence of unconscious perceptual processing on decision-making: A new perspective from cognitive neuroscience applied to Generation Z. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.01728

Sutin, A., Costa, P., Wethington, E., & Eaton, W. (2010). Turning points and lessons learned: Stressful life events and personality trait development across middle adulthood. *Psychology and Aging, 25,* 524–533.

Sutton, A. (2020). Living the good life: A meta-analysis of authenticity, well-being and engagement. *Personality and Individual Differences*, *153*, 109645. https://doi.org/10.1016/j.paid.2019.109645

Sutton-Smith, B., & Rosenberg, B. C. (1970). *The sibling*. Holt, Rinehart & Winston.

Swann, W., Chang-Schneider, C., & McClarty, K. (2007). Do people's self-views matter? Self-concept and self-esteem in everyday life. *American Psychologist, 62*, 84–94.

Sweeny, K., & Shepperd, J. (2010). Commentary: The costs of optimism and the benefits of pessimism. *Emotion, 10,* 750–753.

Syed, M., Eriksson, P. L., Frisén, A., Hwang, C. P., & Lamb, M. E. (2020). Personality development from age 2 to 33: Stability and change in ego resiliency and ego control and associations with adult adaptation. *Developmental Psychology*, *56*(4), 815.

Szczygieł, D., & Mikolajczak, M. (2017). Why are people high in emotional intelligence happier? They make the most of their positive emotions. *Personality and Individual Differences*, *117*, 177–181. https://doi.org/10.1016/j.paid.2017.05.051

Szepsenwol, O., Griskevicius, V., Simpson, J. A., Young, E. S., Fleck, C., & Jones, R. E. (2017). The effect of predictable early childhood environments on sociosexuality in early adulthood. *Evolutionary Behavioral Sciences*, *11*(2), 131.

Szepsenwol, O., Zamir, O., & Simpson, J. A. (2019). The effect of early-life harshness and unpredictability on intimate partner violence in adulthood: A life history perspective. *Journal of Social and Personal Relationships*, *36*, 1542–1556.

Taber, L., & Whittaker, S. (2018). Personality depends on the medium: Differences in self-perception on Snapchat, Facebook and offline. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (pp. 1–13).

Tadmor, C. T., Galinsky, A. D., & Maddux, W. W. (2012). Getting the most out of living abroad: Biculturalism and integrative complexity as key drivers of creative and professional success. *Journal of Personality and Social Psychology*, *103*(3), 520.

Tadmor, C. T., Tetlock, P. E., & Peng, K. (2009). Acculturation strategies and integrative complexity: The cognitive implications of biculturalism. *Journal of Cross-Cultural Psychology*, *40*(1), 105–139.

Tafarodi, R. W., Shaughnessy, S. C., Yamaguchi, S., & Murakoshi, A. (2011). The reporting of self-esteem in Japan and Canada. *Journal of Cross-Cultural Psychology, 42*(1), 155–164.

Taft, L. B., & Nehrke, M. F. (1990). Reminiscences, life review, and ego integrity in nursing home residents. *International Journal of Aging and Human Development, 30,* 189–196.

Tagkaloglou, S., & Kasser, T. (2018). Increasing collaborative, pro-environmental activism: The roles of motivational interviewing, self-determined motivation, and self-efficacy. *Journal of Environmental Psychology*, *58*, 86–92.

Taiyi Yan, T., Tangirala, S., Vadera, A. K., & Ekkirala, S. (2022). How employees learn to speak up from their leaders: Gender congruity effects in the development of voice self-efficacy. *Journal of Applied Psychology*, *107*(4), 650.

Takano, K., Sakamoto, S., & Tanno, Y. (2014). Repetitive thought impairs sleep quality: An experience sampling study. *Behavior Therapy, 45,* 67–82.

Talepasand, S. (2020). Predictors of subjective wellbeing in students of medical sciences: The role of orientation to happiness and life goals. *Practice in Clinical Psychology*, *8*(2), 109–122. https://doi.org/10.32598/jpcp.8.2.28.2

Tallandini, M. A., & Caudek, C. (2010). Defense mechanisms development in typical children. *Psychotherapy Research,* 20(5), 535–545.

Tamamiya, Y., & Jiraki, K. (2013). The relationship between playing digital games and recognition of facial expressions in children. *10th Asian Association of Social Psychology Biennial Conference, Yogyakarta, Indonesia, August.* http://psycnet. apa.org/psycextra/627722013-763.pdf

Tan, P. Z., Oppenheimer, C. W., Ladouceur, C. D., Butterfield, R. D., & Silk, J. S. (2020). A review of associations between parental emotion socialization behaviors and the neural substrates of emotional reactivity and regulation in youth. *Developmental Psychology*, *56*(3), 516.

Tandoc Jr., E. C., Ferrucci, P., & Duffy, M. (2015). Facebook use, envy, and depression among college students: Is facebooking depressing? *Computers in Human Behavior, 43,* 139–146.

Tang, M., Hofreiter, S., Reiter-Palmon, R., Bai, X., & Murugavel, V. (2021). Creativity as a means to well-being in times of COVID-19 pandemic: Results of a cross-cultural study. *Frontiers in Psychology*, *12*, 601389.

Tang, S., & Li, K. (2021). The influence of Chinese machiavellianism and moral identity on the level of anxiety in moral dilemma situations in Chinese students. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.615835

Tangney, J., Baumeister, R., & Boone, A. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality, 72,* 271–324.

Taormina, R. J., & Gao, J. H. (2013). Maslow and the motivation hierarchy: Measuring satisfaction of the needs. *American Journal of Psychology, 126*(2), 155–177. https://www.jstor.org/stable/10.5406/amerjpsyc.126.2.0155

Taormina, R. J., Gao, J. H., & Kuok, A. C. H. (2022). Measuring specific traditional Chinese values in relation to satisfaction of the five Maslow needs. *Psychological Thought*, *15*(1), 132–164. https://doi.org/10.37708/psyct.v15i1.636

Tatum, A. K. (2018). Workplace climate and satisfaction in sexual minority populations: An application of social cognitive career theory. *Journal of Counseling Psychology*, *65*(5), 618.

Tay, L., & Diener, E. (2011). Needs and subjective well-being around the world. *Journal of Personality and Social Psychology*, *101*(2), 354.

Taylor, C. L., & Barbot, B. (2021). Gender differences in creativity: Examining the greater male variability hypothesis in different domains and tasks. *Personality and Individual Differences*, *174*, 110661. https://doi.org/10.1016/j.paid.2021.110661

Taylor, D. D., & Mullen, P. R. (2019). Adlerian personality priority assessment: A psychometric evaluation. *The Journal of Individual Psychology, 75*(2), 122–144.

Taylor, J. (2009, April 30). The 2009 Time 100: Paul Eckman. *Time.* http://content.time.com/time/specials/packages/article/0,28804,1894410_1893209_189347 5,00.html

Taylor, M. (2000). The influence of self-efficacy on alcohol use among American Indians. *Cultural Diversity and Ethnic Minority Psychology, 6,* 152–167.

Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*, 1–18.

Tellegen, A., Lykken, D. T., Bouchard, T. J., Wilcox, K., Segal, N., & Rich, S. (1988). Personality similarity in twins reared apart and together. *Journal of Personality and Social Psychology, 54,* 1031–1039.

Teng, Z., Nie, Q., Guo, C., Zhang, Q., Liu, Y., & Bushman, B. J. (2019). A longitudinal study of link between exposure to violent video games and aggression in Chinese adolescents: The mediating role of moral disengagement. *Developmental Psychology*, *55*(1), 184. http://dx.doi.org/10.1037/dev0000624

Terracciano, A., McCrae, R., & Costa, P. (2010). Intra-individual change in personality stability and age. *Journal of Research in Personality, 44,* 31–37.

Tetlock, P. E. (1983). Cognitive style and political ideology. *Journal of Personality and Social Psychology, 45,* 118–126.

Tetlock, P. E. (1984). Cognitive style and political belief systems in the British House of Commons. *Journal of Personality and Social Psychology, 46,* 365–375.

Thacker, S., & Griffiths, M. (2012). An exploratory study of trolling in online video gaming. *International Journal of Cyber Behavior: Psychology and Learning, 2,* 17–33.

Thiel, C. E., Bonner, J., Bush, J. T., Welsh, D. T., & Pati, R. (2021). Rationalize or reappraise? How envy and cognitive reappraisal shape unethical contagion. *Personnel Psychology*, *74*(2), 237–263.

Thompson, S. C., Sobolew-Shubin, A., Galbraith, M. E., Schwankovsky, L., & Cruzen, D. (1993). Maintaining perception of control: Finding perceived control in low-control circumstances. *Journal of Personality and Social Psychology, 64,* 293–304.

Thompson, T. (1988). Benedictus behavior analysis: B. F. Skinner's magnum opus at fifty [Review of the book *Behavior of organisms: An experimental analysis*]. *Contemporary Psychology, 33,* 397–402.

Thomson, W. (2016). Depression, neuroticism, and the discrepancy between actual and ideal self-perception. *Personality and Individual Differences*, *88*, 219–224. https://doi.org/10.1016/j.paid.2015.09.003

Thornberg, R., Wänström, L., Elmelid, R., Johansson, A., & Mellander, E. (2020). Standing up for the victim or supporting the bully? Bystander responses and their associations with moral disengagement, defender self-efficacy, and collective efficacy. *Social Psychology of Education*, *23*, 563–581.

Tian, Y., Zhao, Y., Lv, F., Qin, N., & Chen, P. (2021). Associations among the Big Five personality traits, maladaptive cognitions, and internet addiction across three time measurements in 3 months during the COVID-19 pandemic. *Frontiers in Psychology*, *12*, 654825.

Tibubos, A. N., Köber, C., Habermas, T., & Rohrmann, S. (2019). Does self-acceptance captured by life narratives and self-report predict mental health? A longitudinal multi-method approach. *Journal of Research in Personality*, *79*, 13–23.

Tobey, L. H., & Bruhn, A. R. (1992). Early memories and the criminally dangerous. *Journal of Personality Assessment, 59,* 137–152.

Tohme, O., & Joseph, S. (2020). Authenticity is correlated with mindfulness and emotional intelligence. *Journal of Humanistic Psychology*, 002216782094092. https://doi.org/10.1177/0022167820940926

Tomina, Y., & Takahata, M. (2010). A behavioral analysis of force-controlled operant tasks in American lobster. *Physiology and Behavior, 101,* 108–116.

Tomlin, M., & Reed, P. (2012). Effects of fixed-time reinforcement delivered by teachers for reducing problem behavior in special education classrooms. *Journal of Behavioral Education, 21,* 150–162.

Tong, J., & Wang, L. (2006). Validation of locus of control scale in Chinese organizations. *Personality and Individual Differences, 41,* 941–950.

Torges, C., Stewart, A., & Duncan, L. (2008). Achieving ego integrity: Personality development in late midlife. *Journal of Research in Personality, 42*(4), 1004–1019.

Torges, C., Stewart, A., & Miner-Rubino, K. (2005). Personality after prime of life: Men and women coming to terms with regrets. *Journal of Research in Personality, 39,* 148–165.

Torges, C. M., Stewart, A. J., & Nolen-Hoeksema, S. (2008). Regret resolution, aging, and adapting to loss. *Psychology and Aging*, *23*(1), 169.

Tori, C., & Bilmes, M. (2002). Multiculturalism and psychoanalytic psychology: The validation of a defense mechanism measure in an Asian population. *Psychoanalytic Psychology, 19,* 701–721.

Torres, L., & Ong, A. (2010). A daily diary investigation of Latino ethnic identity, discrimination, and depression. *Cultural Diversity and Ethnic Minority Psychology, 16*(4), 561–568.

Tosun, L., & Lajunen, T. (2010). Does Internet use reflect your personality? Relationship between Eysenck's personality dimensions and Internet use. *Computers in Human Behavior, 26,* 162–167.

Toussaert, S. (2018). Eliciting temptation and self-control through menu choices: A lab experiment. *Econometrica*, *86*, 859–889.

Towns, M. H. (2010). Where are the women of color? Data on African American, Hispanic, and Native American faculty in STEM. *Journal of College Science Teaching*, *39*(4), 8.

Triandis, H. C., & Suh, E. M. (2002). Cultural influences on personality. *Annual Review of Psychology, 53,* 133–160.

Tribich, D., & Messer, S. (1974). Psychoanalytic character type and states of authority as determiners of suggestibility. *Journal of Consulting and Clinical Psychology, 42,* 842–848.

Trombello, J. M., Schoebi, D., & Bradbury, T. N. (2015). Personal vulnerabilities and assortative mate selection among newlywed spouses. *Journal of Social and Clinical Psychology*, *34*(6), 529–553.

Trovato, G., Kishi, T., Endo, N., Zecca, M., Hashimoto, K., & Takanishi, A. (2014). Cross-cultural perspectives on emotion expressive humanoid robotic head: Recognition of facial expressions and symbols. *International Journal of Social Robotics, 5,* 515–527.

Trzesniewski, K. H., Donnellan, M. B., Moffitt, B., Robins, R. W., Poulton, R., & Caspi, A. (2006). Low self-esteem during adolescence predicts poor health, criminal behavior, and limited economic prospects during adulthood. *Developmental Psychology, 42,* 381–390.

Tucker-Drob, E. M., Briley, D. A., Engelhardt, L. E., Mann, F. D., & Harden, K. P. (2016). Genetically mediated associations between measures of childhood character and academic achievement. *Journal of Personality and Social Psychology*, *111*(5), 790.

Tucker, J., Elliott, M., & Klein, D. (2006). Social control of health behavior: Associations with conscientiousness and neuroticism. *Personality and Social Psychology Bulletin, 32,* 1143–1152.

Tucker, W. (2009). *The Cattell controversy: Race, science, and ideology*. Champaign: University of Illinois Press.

Turban, J. L., Beckwith, N., Reisner, S. L., & Keuroghlian, A. S. (2020). Association between recalled exposure to gender identity conversion efforts and psychological distress and suicide attempts among transgender adults. *JAMA Psychiatry*, *77*(1), 68–76.

Turkheimer E., Pettersson E., & Horn E. E. (2014). A phenotypic null hypothesis for the genetics of personality. *Annual Review of Psychology, 65*, 12.1–12.26.

Türk-Kurtça, T., & Kocatürk, M. (2020). The role of childhood traumas, emotional self-efficacy and internal-external locus of control in predicting psychological resilience. *International Journal of Education & Literacy Studies*, *8*(3) http://dx.doi.org/10.7575/aiac.ijels.v.8n.3p.105

Turkle, S. (1995). *Life on the screen: Identity in the age of the Internet.* Simon & Schuster.

Turkum, A. (2005). Do optimism, social network richness, and submissive behaviors predict well-being? Study with

a Turkish sample. *Social Behavior and Personality, 33,* 619–628.

Twenge, J. M. (2000). The age of anxiety? The birth cohort change in anxiety and neuroticism, 1952–1993. *Journal of Personality and Social Psychology*, *79*(6), 1007.

Udris, R. (2014). Cyberbullying among high school students in Japan: Development and validation of the Online Disinhibition Scale. *Computers in Human Behavior, 41,* 253–261.

Ugoani, J. (2015). Emotional intelligence and personality stability among urban adolescents in Nigeria. *Advances in Applied Psychology*, *1*(2), 135–144.

Uhlmann, E., & Swanson, J. (2004). Exposure to violent video games increases automatic aggressiveness. *Journal of Adolescence*, *27*(1), 41–52.

Umaña-Taylor, A. (2004). Ethnic identity and self-esteem: Examining the role of social context. *Journal of Adolescence, 27*, 139–146.

Usborne, E., & Taylor, D. (2010). The role of cultural identity clarity for self-concept clarity, self-esteem, and subjective well-being. *Personality and Social Psychology Bulletin, 36,* 883–897.

USDA. (2022). Food security and nutrition assistance. https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-security-and-nutrition-assistance/#:~:text=The%20prevalence%20of%20food%20insecurity,had%20very%20low%20food%20security.

Utsey, S., Payne, Y., Jackson, E., & Jones, A. (2002). Race-related stress, quality of life indicators, and life satisfaction among elderly African Americans. *Cultural Diversity and Ethnic Minority Psychology, 8,* 7–17.

Utz, S. (2003). Social identification and interpersonal attraction in MUDs [multi-user dungeons]. *Swiss Journal of Psychology, 62,* 91–101.

Uzgiris, I. C. (Ed.). *Social interaction and communication during infancy*. Jossey-Bass, 1979.

Vaidya, J., Latzman, R., Markon, K., & Watson, D. (2010). Age differences on measures of disinhibition during young adulthood. *Personality and Individual Differences, 48,* 815–820.

Vaidya, J. G., Gray, E. K., Haig, J., & Watson, D. (2002). On the temporal stability of personality: Evidence for differential stability and the role of life experiences. *Journal of Personality and Social Psychology, 83*(6), 1469.

Vainio, M. M., & Daukantaitė, D. (2016). Grit and different aspects of well-being: Direct and indirect relationships via sense of coherence and authenticity. *Journal of Happiness Studies*, *17*, 2119–2147.

Valderrama, J., Macrynikola, N., & Miranda, R. (2020). Early life trauma, suicide ideation, and suicide attempts: The role of rumination and impulsivity. *Archives of Suicide Research*, 1–17.

Valentijn, S., Hill, R., Van Hooren, S., Bosma, H., Van Boxtel, M., Jolles, J., & Ponds, R. W. H. M. (2006). Memory self-efficacy predicts memory performance: Results from a 6-year follow-up study. *Psychology and Aging, 21,* 165–172.

Valli, K., Revonsuo, A., Palkas, O., & Punamaki, R. (2006). The effect of trauma on dream content: A field study of Palestinian children. *Dreaming, 16,* 63–87.

Van Aken, M., Denisson, J., Branje, S., Dubas, J., & Goossens, L. (2006). Midlife concerns and short-term personality change in middle adulthood. *European Journal of Personality, 20,* 497–513.

Van Boven, L. (2005). Experientialism, materialism, and the pursuit of happiness. *Review of General Psychology, 9,* 132–142.

Van de Water, D. A., & McAdams, D. P. (1989). Generativity and Erikson's "belief in the species." *Journal of Research in Personality, 23,* 435–449.

Van den Heuvel, M., Demerouti, E., & Peeters, M. C. (2015). The job crafting intervention: Effects on job resources, self-efficacy, and affective well-being. *Journal of Occupational and Organizational Psychology*, *88*(3), 511–532.

Van der Aa, N., Overbeek, G., Engels, R., Scholte, R., Meerkerk, G., & Van den Eijnden, J. (2009). Daily and compulsive Internet use and well-being in adolescence: A diatheses-stress model based on the Big Five personality traits. *Journal of Youth and Adolescence, 38(6),* 765–776.

Van der Kaap-Deeder, J., Soenens, B., Van Petegem, S., Neyrinck, B., De Pauw, S., Raemdonck, E., & Vansteenkiste, M. (2020). Live well and die with inner peace: The importance of retrospective need-based experiences, ego integrity and despair for late adults' death attitudes. *Archives of Gerontology and Geriatrics*, *91*, 104184.

van der Lee, R., Ellemers, N., Scheepers, D., & Rutjens, B. T. (2017). In or out? How the perceived morality (vs. competence) of prospective group members affects acceptance and rejection. *European Journal of Social Psychology*, *47*(6), 748–762. https://doi.org/10.1002/ejsp.2269

Van der Linden, D., Scholte, R., Cillessen, A., Nijenhuis, J., & Segers, E. (2010). Classroom ratings of likeability and popularity are related to the Big Five and the general factor of personality. *Journal of Research in Personality, 44*(5), 669–671.

Van der Oord, S., & Tripp, G. (2020). How to improve behavioral parent and teacher training for children with ADHD: Integrating empirical research on learning and motivation into treatment. *Clinical Child and Family Psychology Review*, *23*(4), 577–604.

Van Dijk, M. P. A., Hale, W. W., Hawk, S. T., Meeus, W., & Branje, S. (2020). Personality development from age 12 to 25 and its links with life transitions. *European Journal of Personality*, *34*(3), 322–344. https://doi.org/10.1002/per.2251

van Dijk, T., Dijkshoorn, H., van Dijk, A., Cremer, S., & Agyemang, C. (2013). Multidimensional health locus of control and depressive symptoms in the multi-ethnic population of the Netherlands. *Social Psychiatry and Psychiatric Epidemiology, 48,* 1931–1939.

Van Dillen, L. F., Enter, D., Peters, L. P. M., van Dijk, W. W., & Rotteveel, M. (2017). Moral fixations: The role of moral integrity and social anxiety in the selective avoidance of social threat. *Biological Psychology*, *122*, 51–58. https://doi.org/10.1016/j.biopsycho.2016.01.016

van Doeselaar, L., Klimstra, T. A., Denissen, J. J., Branje, S., & Meeus, W. (2018). The role of identity commitments in depressive symptoms and stressful life events in adolescence and young adulthood. *Developmental Psychology*, *54*(5), 950.

van Dongen, J. D., de Groot, M., Rassin, E., Hoyle, R. H., & Franken, I. H. (2022). Sensation seeking and its relationship with psychopathic traits, impulsivity and aggression: A validation of the Dutch Brief Sensation Seeking Scale (BSSS). *Psychiatry, Psychology and Law*, *29*(1), 20–32.

Van Hiel, A., Mervielde, I., & De Fruyt, F. (2006). Stagnation and generativity: Structure, validity, and differential relationships with adaptive and maladaptive personality. *Journal of Personality, 74,* 543–573.

Van Hiel, A., & Vansteenkiste, M. (2009). Ambitions fulfilled? The effects of intrinsic and extrinsic goal attainment on older adults' ego-integrity and death attitudes. *International Journal of Aging and Human Development, 68,* 27–51.

Van Steendam, E., Rijlaarsdam, G., Sercu, L., & Van den Bergh, H. (2010). The effect of instruction type and dyadic or individual emulation on the quality of higher-order peer feedback in EFL. *Learning and Instruction*, *20*(4), 316–327.

Van Wijngaarden, E., Leget, C., & Goossensen, A. (2015). Ready to give up on life: The lived experience of elderly people who feel life is completed and no longer worth living. *Social Science & Medicine*, *138*, 257–264.

van Zyl, Y., & Dhurup, M. (2018). Self-efficacy and its relationship with satisfaction with life and happiness among university students. *Journal of Psychology in Africa*, *28*(5), 389–393.

Vandewater, E. A., Ostrove, J. M., & Stewart, A. J. (1997). Predicting women's well-being in midlife: The importance of personality development and social role involvements. *Journal of Personality and Social Psychology, 72,* 1147–1160.

Vandiver, B., Cross, W., Worrell, F., & Fhagen-Smith, P. (2002). Validating the Cross Racial Identity Scale. *Journal of Counseling Psychology, 49,* 71–85.

Vaughan, A., de Passille, A., Stookey, J., & Rushen, J. (2014). Operant conditioning of urination by calves. *Applied Animal Behavior Science, 158,* 8–15.

Vazsonyi, A. T., Ksinan, A., Mikuška, J., & Jiskrova, G. (2015). The Big Five and adolescent adjustment: An empirical test across six cultures. *Personality and Individual Differences*, *83*, 234–244. https://doi.org/10.1016/j.paid.2015.03.049

Vazsonyi, A. T., Ksinan, A. J., Javakhishvili, M., Scarpate, J. M., & Kahumoku-Fessler, E. (2022). Links between parenting and internalizing and externalizing problems: Cross-cultural evidence from ten countries. *Child Psychiatry and Human Development, 53*(4), 667–683. https://doi.org/10.1007/s10578-021-01153-2

Veenhoven, R. (2005). Is life getting better? How long and happily do people live in modern society? *European Psychologist, 10,* 330–343.

Ventura, M., Salanova, M., & Llorens, S. (2015). Professional self-efficacy as a predictor of burnout and engagement: The role of challenge and hindrance demands. *Journal of Psychology: Interdisciplinary and Applied, 149,* 277–302.

Verkuyten, M. (2009). Self-esteem and multiculturalism: An examination among ethnic minority and majority groups in the Netherlands. *Journal of Research in Personality, 43*, 419–427.

Verschuren, A., & Douilliez, C. (2022). Goal disengagement and goal reengagement: Associations with depression, anxiety, and satisfaction with life. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*. https://doi.org/10.1037/cbs0000360.supp

Verschueren, M., Claes, L., Bogaerts, A., Palmeroni, N., Gandhi, A., Moons, P., & Luyckx, K. (2018). Eating disorder symptomatology and identity formation in adolescence: A cross-lagged longitudinal approach. *Frontiers in Psychology*, *9*, 816.

Vetere, A., & Myers, L. (2002). Repressive coping style and adult romantic attachment style. *Personality and Individual Differences, 32,* 799–807.

Vicianova, M. (2015). Historical techniques of lie detection. *Europe's Journal of Psychology, 11*(3), 522.

Viken, R. J., Rose, R. J., Kaprio, J., & Koskenvuo, M. (1994). A developmental genetic analysis of adult personality: Extraversion and neuroticism from 18 to 59 years of age. *Journal of Personality and Social Psychology, 66,* 722–730.

Villanova, P., & Peterson, C. (1991). Meta-analysis of human helplessness experiments. Unpublished data. (Cited in Peterson, Maier, & Seligman, 1993.)

Viner, R. (1996). Melanie Klein and Anna Freud: The discourse of the early dispute. *Journal of the History of the Behavioral Sciences, 32,* 4–15.

Viney, L. L., Metcalfe, C. and Winter, D. A. 2005. The effectiveness of personal construct psychotherapy: A meta-analysis. In D. Winter & L. Viney (Ed.), *Personal construct psychotherapy: Advances in theory, practice, and research* (pp. 347–364). London: Whurr.

Vishkin, A., Kitayama, S., Berg, M. K., Diener, E., Gross-Manos, D., Ben-Arieh, A., & Tamir, M. (2022). Adherence to emotion norms is greater in individualist cultures than in collectivist cultures. *Journal of Personality and Social Psychology*. https://doi.org/10.1037/pspi0000409.supp

Visintainer, M., Volpicelli, J., & Seligman, M. E. P. (1982). Tumor rejection in rats after inescapable or escapable shock. *Science, 216,* 437–439.

Vittersø, J., & Søholt, Y. (2011). Life satisfaction goes with pleasure and personal growth goes with interest: Further arguments for separating hedonic and eudaimonic well-being. *The Journal of Positive Psychology*, *6*(4), 326–335.

Vlaeyen, J. W., & Crombez, G. (2020). Behavioral conceptualization and treatment of chronic pain. *Annual Review of Clinical Psychology, 16*, 187–212.

Vleioras, G., & Bosma, H. (2005). Are identity styles important for psychological well-being? *Journal of Adolescence, 28,* 397–409.

Vogel, E., Rose, J., Roberts, L., & Eckles, K. (2014). Social comparison, social media and self-esteem. *Psychology of Popular Media Culture, 3*, 206–222.

Von Dras, D. D., & Siegler, I. C. (1997). Stability in extraversion and aspects of social support at midlife. *Journal of Personality and Social Psychology, 72,* 233–241.

von Rueden, C. R., Lukaszewski, A. W., & Gurven, M. (2015). Adaptive personality calibration in a human society: Effects of embodied capital on prosocial traits. *Behavioral Ecology*, *26*(4), 1071–1082. https://doi.org/10.1093/beheco/arv051

von Rueden, C. R., Redhead, D., O'Gorman, R., Kaplan, H., & Gurven, M. (2019). The dynamics of men's cooperation and social status in a small-scale society. *Proceedings of the Royal Society B*, *286*(1908), 20191367. https://doi.org/10.1098/rspb.2019.1367

Vötter, B., & Schnell, T. (2019). Bringing giftedness to bear: Generativity, meaningfulness, and self-control as resources for a happy life among gifted adults. *Frontiers in Psychology*, *10*, 1972. https://doi.org/10.3389/fpsyg.2019.01972

Vukasović, T., & Bratko, D. (2015). Heritability of personality: A meta-analysis of behavior genetic studies. *Psychological Bulletin, 141*(4), 769–785. https://doi.org/10.1037/bul0000017

Wagerman, S., & Funder, D. (2007). Acquaintance reports of personality and academic achievement: A case for conscientiousness. *Journal of Research in Personality, 41,* 221–229.

Wagner, J., Lang, F., Neyer, F., & Wagner, G. (2014). Self-esteem across adulthood. *European Journal of Aging, 11,* 109–119.

Waldrop, D., Lightsey, O., Ethington, C., Woemmel, C., & Coke, A. (2001). Self-efficacy, optimism, health competence, and recovery from orthopedic surgery. *Journal of Counseling Psychology, 48,* 233–238.

Walker, B., & Winter, D. (2007). The elaboration of personal construct psychology. *Annual Review of Psychology, 58,* 453–477.

Walker, R., Alabi, D., Roberts, J., & Obasi, M. (2010). Ethnic group differences in reasons for living and the moderating role of cultural world view. *Cultural Diversity and Ethnic Minority Psychology, 16,* 372–378.

Wallerstein, R. (2014). Erik Erikson and his problematic identity. *Journal of the American Psychoanalytic Association, 62,* 657–675.

Walsh, L. D., Onorato, M., & Simms, S. V. K. (2016). Ethical sensitivity and its relationship to personality and area of study: Quarterly journal. *S.A.M. Advanced Management Journal, 81*(2), 11–202.

Walters, R. H., Bowen, N. V., & Parke, R. D. (1963). *Experimentally induced disinhibition of sexual responses*. (Cited in Bandura & Walters, 1963.)

Walton, G. M., & Cohen, G. L. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science*, *331*(6023), 1447–1451.

Walton, K. E., & Roberts, B. W. (2004). On the relationship between substance use and personality traits: Abstainers are not maladjusted. *Journal of Research in Personality, 38*(6), 515–535.

Wan, W. (2010, October 11). The fundamentals of Freud come into fashion in China. *Washington Post*.

Wang, J., Han, K., Ketterer, H. L., Weed, N. C., Ben-Porath, Y. S., Kim, J. H., & Moon, K. (2021). Evaluating the measurement invariance of MMPI-2-RF Restructured Clinical Scale 4 (Antisocial Behavior) between American and Korean clinical samples: Exploring cultural and translation issues affecting item responding. *Journal of Personality Assessment, 103*(4), 465–475.

Wang, Q., Bowling, N., & Eschleman, K. (2010). A meta-analytic examination of work and general locus of control. *Journal of Applied Psychology, 95,* 761–768.

Wang, S., Shi, M., & Chen, H. (2010). Ego identity development and its relation to emotional adjustment in college students. *Chinese Journal of Clinical Psychology, 18,* 215–218.

Wang, S. M., & Tickle-Degnen, L. (2018). Emotional cues from expressive behavior of women and men with Parkinson's disease. *PLoS One*, *13*(7), e0199886.

Wang, Y., Zhu, Y., Chen, P., Yan, F., Chen, S., Li, G., Hu, X., Wang, L., & Yang, Z. (2018). Neuroticism is associated with altered resting-state functional connectivity of amygdala following acute stress exposure. *Behavioural Brain Research*, *347*, 272–280.

Waqas, A., Rehman, A., Malik, A., Muhammad, U., Khan, S., & Mahmood, N. (2015). Association of ego defense mechanisms with academic performance, anxiety and depression in medical students: A mixed methods study. *Cureus, 7*(9):*e337*.

Warburton, J., McLaughlin, D., & Pinsker, D. (2006). Generative acts: Family and community involvement of older Australians. *International Journal of Aging and Human Development, 63,* 115–137.

Ward, C., Kim, I., Karl, J. A., Epstein, S., & Park, H. J. (2020). How normative multiculturalism relates to immigrant well-being. *Cultural Diversity and Ethnic Minority Psychology*, *26*(4), 581. http://dx.doi.org/10.1037/cdp0000317

Warner, L. M., Stadler, G., Lüscher, J., Knoll, N., Ochsner, S., Hornung, R., & Scholz, U. (2018). Day-to-day mastery and self-efficacy changes during a smoking quit attempt: Two studies. *British Journal of Health Psychology*, *23*(2), 371–386.

Waterman, A. S. (1982). Identity development from adolescence to adulthood: An extension of theory and a review of research. *Developmental Psychology, 18,* 341–358.

Waterman, C. K., Buebel, M. E., & Waterman, A. S. (1970). Relationship between resolution of the identity crisis and outcomes of previous psychosocial crises. *Proceedings of the 78th Annual Convention of the American Psychological Association, 5,* 467–468.

Watkins, C. E. (1994). Measuring social interest. Individual Psychology: *Journal of Adlerian Theory, Research & Practice*.

Watkins, C. E., Jr., & St. John, C. (1994). Validity of the Sulliman Scale of Social Interest. *Individual Psychology, 50,* 166–169.

Watrin, L., Schroeders, U., & Wilhelm, O. (2022). Structural invariance of declarative knowledge across the adult lifespan. *Psychology and Aging*, *37*(3), 283.

Watson, C. B., Chemers, M. M., & Preiser, N. (2001). Collective efficacy: A multilevel analysis. *Personality and Social Psychology Bulletin, 27,* 1057–1068.

Watson, D., & Clark, L. A. (1992). On traits and temperament: General and specific factors of emotional experience and their relation to the five-factor model. *Journal of Personality, 60*(2), 441–476.

Watson, D., & Humrichouse, J. (2006). Personality development in emerging adulthood: Integrating evidence from self-ratings and spouse ratings. *Journal of Personality and Social Psychology, 91,* 959–974.

Watson, J. C. (2016). The effect of athletic identity and locus of control on the stress perceptions of community college student-athletes. *Community College Journal of Research and Practice*, *40*(9), 729–738. https://doi.org/10.1080/10668926.2015.1072595

Watson-Jones, R. E., Whitehouse, H., & Legare, C. H. (2016). In-group ostracism increases high-fidelity imitation in early childhood. *Psychological Science*, *27*(1), 34–42.

Watson, M. W., & Getz, K. (1990). The relationship between Oedipal behaviors and children's family role concepts. *Merrill-Palmer Quarterly, 36,* 487–505.

Watts, R., & Holden, J. (1994). Why continue to use "fictional finalism?" *Individual Psychology, 50,* 161–163.

Węziak-Białowolska, D., McNeely, E., & VanderWeele, T. J. (2019). Human flourishing in cross cultural settings. evidence from the United States, China, Sri Lanka, Cambodia, and Mexico. *Frontiers in Psychology*, *10*, 1269. https://doi.org/10.3389/fpsyg.2019.01269

Weber, H., Vollmann, M., & Renner, B. (2007). The spirited, the observant, and the disheartened: Social concepts of optimism, realism, and pessimism. *Journal of Personality, 75,* 169–197.

Webster, R. (1995). *Why Freud was wrong: Sin, science, and psychoanalysis*. New York: Basic Books.

Wechsler, S. M., Benson, N., de Lara, W. D. L. W., Bachert, C. M. D. A., & Gums, E. F. (2018). Adult temperament styles: A network analysis of their relationships with the Big Five Personality Model. *European Journal of Education and Psychology*, *11*(1), 61–75.

Wechsler, S. M., Vendramini, C. M. M., & Oakland, T. (2012). Thinking and creative styles: A validity study. *Creativity Research Journal, 24*(2-3), 235–242.

Wegner, D. M., & Wheatley, T. (1999). Apparent mental causation: Sources of the experience of will. *American Psychologist, 54,* 480–492.

Weinberger, I., & Silverman, L. H. (1990). Testability and empirical validation of psychoanalytic dynamic propositions through subliminal psychodynamic activation. *Psychoanalytic Psychology, 7,* 299–339.

Weinstein, N., Legate, N., Ryan, W. S., & Hemmy, L. (2019). Autonomous orientation predicts longevity: New findings from the nun study. *Journal of Personality*, *87*(2), 181–193.

Weinstein, N., Legate, N., Ryan, W. S., Sedikides, C., & Cozzolino, P. J. (2017). Autonomy support for conflictual and stigmatized identities: Effects on ownership and psychological health. *Journal of Counseling Psychology*, *64*(5), 584.

Weinstein, N., Ryan, W. S., DeHaan, C. R., Przybylski, A. K., Legate, N., & Ryan, R. M. (2012). Parental autonomy support and discrepancies between implicit and explicit sexual identities: Dynamics of self-acceptance and defense. *Journal of Personality and Social Psychology*, *102*(4), 815.

Weiss, A., King, J., & Perkins, L. (2006). Personality and subjective well-being in orangutans. *Journal of Personality and Social Psychology, 90,* 501–511.

Weiss, D. (2014). The relationship between Internet social networking, social anxiety, self-esteem, narcissism, and gender among college students. *Dissertation Abstracts International. Section B: Sciences and Engineering, Vol. 74 (9-BE).*

Weitlauf, J. C., Cervone, D., Smith, R. E., & Wright, P. M. (2001). Assessing generalizations in perceived self-efficacy: Multidomain and global assessments of the effects of self-defense training for women. *Personality and Social Psychology Bulletin, 27,* 1683–1691.

Wen, X., Zhao, Y., Yang, Y. T., Wang, S., & Cao, X. (2021). Do students with different majors have different personality traits? Evidence from two Chinese agricultural universities. *Frontiers in Psychology*, *12*, 641333.

Wendorf, C., Lucas, T., Imamoglu, E., Weisfeld, C., & Weisfeld, G. (2011). Marital satisfaction across three cultures: Does the number of children have an impact after accounting for other marital demographics? *Journal of Cross-Cultural Psychology, 42*(3), 340–354.

Werner, N., & Bumpus, M. (2010). Involvement in Internet aggression during early adolescence. *Journal of Youth and Adolescence, 39,* 607–619.

Wernick, L., Kulick, A., & Inglehart, M. (2014). Influences of peers, teachers, and climate on students' willingness to intervene when witnessing anti-transgender harassment. *Journal of Adolescence, 37,* 927–935.

Westen, D. (1990). Psychoanalytic approaches to personality. In L. A. Pervin (Ed.), *Handbook of personality* (pp. 21–65). New York: Guilford Press.

Westen, D. (1998). The scientific legacy of Sigmund Freud. *Psychological Bulletin, 124,* 333–371.

Westerlund, M., Santtila, P., Johansson, A., Jern, P., & Sandnabba, N. (2012). What steers them to the "wrong crowd?" Genetic influence on adolescents' peer-group sexual attitudes. *European Journal of Developmental Psychology, 9*, 645–664.

Westermeyer, J. (2004). Predictors and characteristics of Erikson's life cycle model among men: A 32-year longitudinal study. *International Journal of Aging and Human Development, 58,* 29–48.

Westkott, M. (1986). *The feminist legacy of Karen Horney.* Yale University Press.

Whisman, M. A., Gilmour, A. L., & Salinger, J. M. (2018). Marital satisfaction and mortality in the United States adult population. *Health Psychology*, *37*(11), 1041.

Whitbourne, S. K., Sneed, J. R., & Sayer, A. (2009). Psychosocial development from college through midlife: A 34-year sequential study. *Developmental Psychology, 45*(5), 1328–1340. https://doi.org/10.1037/a0016550

White, C. J., Willard, A. K., Baimel, A., & Norenzayan, A. (2021). Cognitive pathways to belief in karma and belief in god. *Cognitive Science, 45*(1). https://doi.org/10.1111/cogs.12935

Whittaker, V., & Neville, H. (2010). Examining the relation between racial identity attitude clusters and psychological health outcomes in African American college students. *Journal of Black Psychology, 36,* 383–409.

Whittemore, R., D'Eramo Melkus, G., & Grey, M. (2005). Metabolic control, self-management and psychosocial adjustment in women with type 2 diabetes. *Journal of Clinical Nursing, 14*(2), 195–203.

Whyte, S., Brooks, R. C., Chan, H. F., & Torgler, B. (2019). Do certain personality traits provide a mating market competitive advantage? Sex, offspring & the big 5. *Personality and Individual Differences*, *139*, 158–169. https://doi-org.wake.idm.oclc.org/10.1016/j.paid.2018.11.019

Widom, C., Czaja, S., Wilson, H., Allwood, M., & Chauhan, P. (2013). Do the long-term consequences of neglect differ for children of different races and ethnic backgrounds? *Child Maltreatment, 18,* 42–55.

Wießner, I., Falchi, M., Palhano-Fontes, F., Oliveira Maia, L., Feilding, A., Ribeiro, S., Mota, N. B., Araujo, D. B., & Tófoli, L. F. (2022). Low-dose LSD and the stream of thought: Increased discontinuity of mind, deep thoughts and abstract flow. *Psychopharmacology*, *239*(6), 1721–1733. https://doi.org/10.1007/s00213-021-06006-3

Williams, C. D., Bravo, D. Y., Umaña-Taylor, A. J., Updegraff, K. A., Jahromi, L. B., Martinez-Fuentes, S., & Elias, M. d. J. (2020). Intergenerational transmission of cultural socialization and effects on young children's developmental competencies among Mexican-origin families. *Developmental Psychology, 56*(2), 199–207. https://doi.org/10.1037/dev0000859

Williams, D. E., & Page, M. M. (1989). A multidimensional measure of Maslow's hierarchy of needs. *Journal of Research in Personality, 23,* 192–213.

Williams, D. N., Smith, D. B., Sukach, T., & Minaiy, C. (2018). Expecting more in relationships—implications of relational entitlement. *The American Journal of Family Therapy*, *46*(4), 321–340.

Williams, K., & Guerra, N. (2011). Perceptions of collective efficacy and bullying perpetration in schools. *Social Problems, 58,* 126–143.

Wilson, C. (1972). *New pathways in psychology.* Taplinger.

Wilson, G., & Dowda, R. (2017). Feeling equal to others predicts life satisfaction: Implications for Adlerian neuro-counselors. *The Journal of Individual Psychology, 73*(3), 173–189. https://doi.org/10.1353/jip.2017.0015

Wilson, K., Fornasier, S., & White, K. (2010). Psychological predictors of young adults use of social networking sites. *Cyberpsychology, Behavior, and Social Networking, 13,* 173–177.

Windsor, T., & Anstey, K. (2010). Age differences in psychosocial predictors of positive and negative affect: A longitudinal investigation of young, midlife, and older adults. *Psychology and Aging, 25,* 641–652.

Winegard, B., Reynolds, T., Baumeister, R. F., & Plant, E. A. (2016). The coalitional value theory of anti-gay bias. *Evolutionary Behavioral Sciences, 10*, 245–269.

Winkielman, P., Berridge, K., & Wilbarger, J. (2005). Unconscious affective reactions to masked happy versus angry faces influence consumption behavior and judgments of value. *Personality and Social Psychology Bulletin, 31,* 121–135.

Winter, D. A. (1992). *Personal construct psychology in clinical practice.* Routledge.

Winter, D. G. (1993). Gordon Allport and letters from Jenny. In K. H. Craik, R. Hogan, & R. N. Wolfe (Eds.), *Fifty years of personality psychology* (pp. 147–163). Plenum Press.

Winter, D. G., & Proctor, H. (2014). Formulation in personal and relational construct psychology: Seeing the world through the client's eyes. In L. Johnstone & R. Dallos (Eds.), *Formulation in psychology and psychotherapy: Making sense of people's problems* (2nd ed., pp. 145–172). Routledge/Taylor & Francis.

Winter, S., Neubaum, G., Eimer, S., Gordon, V., Theil, J., Hermann, J., Meinert, J., & Krämer, N. C. (2014). Another brick in the Facebook wall: How personality traits relate to the content of status updates. *Computers in Human Behavior, 34,* 194–202.

Wirtz, D., Chie, C., Diener, E., & Oishi, S. (2009). What constitutes a good life? Cultural differences in the role of positive and negative affect in subjective well-being. *Journal of Personality, 77,* 1187–1196.

Witt, E. A., Donnellan, M. B., & Orlando, M. J. (2011). Timing and selection effects within a psychology subject pool: Personality and sex matter. *Personality and Individual Differences, 50,* 355–359.

Witt, E. A., Massman, A., & Jackson, L. (2011). Trend in youth's videogame playing, overall computer use, and communication technology use: The impact of self-esteem and the Big Five personality factors. *Computers in Human Behavior, 27,* 763–769.

Wittels, F. (1924). *Sigmund Freud: His personality, his teaching, and his school.* Allen & Unwin.

Wojcik, E. (2012). Girl Scouts' "Science of Happiness Badge" promotes positive psychology. *Monitor on Psychology, 43*(1), 11.

Wolinsky, F., Vander Weg, M., Martin, R., Unverzagt, F., Willis, S., Marsiske, M., Rebok, G. W., Morris, J. N., Ball, K. K., & Tennstedt, S. L. (2009). Does cognitive

training improve internal locus of control among older adults? *Journal of Gerontology: Social Sciences, 65,* 591–598.

Won, S., Lee, S. Y., & Bong, M. (2017). Social persuasions by teachers as a source of student self-efficacy: The moderating role of perceived teacher credibility. *Psychology in the Schools*, *54*(5), 532–547.

Wong, A., Shaw, G., & Ng, D. (2010). Taiwan Chinese managers' personality: Is Confucianism on the wane? *International Journal of Human Resource Management, 21,* 1108–1123.

Wong, S., Lee, B., Ang, R., Oie, T., & Ng, A. (2009). Personality, health, and coping: A cross-national study. *Cross-Cultural Research, 43*(3), 251–279.

Wong, W., & Hines, M. (2014, September 30). Effects of gender color-coding on toddlers' gender-typical toy play. *Archives of Sexual Behavior.* http://psycnet.apa.org/index.cfm?fa=search. displayRecord&id=6CED34DA-D7CA-914D-FDE1-0D6BAE4D5D7 4&resultID=1 &page=1 &dbTab=all&search=true

Wood, A. M., Joseph, S., & Maltby, J. (2009). Gratitude predicts psychological well-being above the Big Five facets. *Personality and Individual differences, 46*(4), 443–447.

Wood, J. M., Garb, H. N., Lilienfeld, S. O., & Nezworski, M. T. (2002). Clinical assessment. *Annual Review of Psychology, 53,* 519–543.

Wood, L. A., Kendal, R. L., & Flynn, E. (2012). Context dependent model-based biases in cultural transmission: Children's imitation is affected by model age over model knowledgeable state. *Evolution and Human Behaviour, 33*, 387–394.

Woodfin, V., Hjeltnes, A., & Binder, P. E. (2021). Perfectionistic individuals' understanding of how painful experiences have shaped their relationship to others. *Frontiers in Psychology*, *12*, 619018.

Woznyj, H. M., Banks, G. C., Dunn, A. M., Berka, G., & Woehr, D. (2020). Re-introducing cognitive complexity: A meta-analysis and agenda for future research. *Human Performance*, *33*(1), 1–33.

Wu, J., Yuan, M., & Kou, Y. (2020). Disadvantaged early-life experience negatively predicts prosocial behavior: The roles of honesty-humility and dispositional trust among Chinese adolescents. *Personality and Individual Differences, 152*, Article 109608. https://doi.org/10.1016/j.paid.2019.109608

Xiang, J., & Shen, H. (2010). Defense mechanisms in college students with borderline personality disorder. *Chinese Mental Health Journal, 24,* 275–278.

Xian-Li, A., & Guang-Xing, X. (2006). Dream contents of modern undergraduate students. *Chinese Mental Health Journal, 14,* 57–67.

Xie, C., Li, L., & Li, Y. (2023). Trajectories of learned helplessness in maintenance haemodialysis patients and their predictive effects on self-management: A latent growth mixture modeling approach. *Psychology Research and Behavior Management*, 351–361.

Xu, W., Oei, T. P., Liu, X., Wang, X., & Ding, C. (2016). The moderating and mediating roles of self-acceptance and tolerance to others in the relationship between mindfulness and subjective well-being. *Journal of Health Psychology*, *21*(7), 1446–1456.

Yalom, I. D., & Leszcz, M. (2005). *The theory and practice of group psychotherapy* (5th ed.). Basic.

Yamagata, S., Suzuki, A., Ando, J., Ono, Y., Kijima, N., Yoshimura, K., Ostendorf, F., Angleitner, A., Riemann, R., Spinath, F. M., Livesley, W. J., Jang, K. L. (2006). Is the genetic structure of human personality universal? A cross-cultural twin study from North America, Europe, and Asia. *Journal of Personality and Social Psychology, 90,* 987–998.

Yamaguchi, S., Greenwald, A. G., Banaji, H. R., Murakami, F., Chen, D., Shiomura, K., Kobayashi, C., Cai, H., & Krendl, A. (2007). Apparent universality of positive implicit self-esteem. *Psychological Science, 18,* 498–500.

Yang, H., & Zhao, S. (2009). Psychological types of Chinese business managers. *Journal of Psychological Type, 69*(12), 157–163.

Yao, M., & Zhong, Z. (2014). Loneliness, social contacts and Internet addiction: A cross-lagged panel study. *Computers in Human Behavior, 30,* 164–170.

Yap, S., & Baharudin, R. (2015, February 4). The relationship between adolescents perceived parental involvement, self-efficacy beliefs, and subjective well-being: A multiple mediator model. *Social Indicators Research*. http://www.research-gate.net/profile/Siew_Ting_Yap2

Yap, S., Settles, I., & Pratt-Hyatt, J. (2011). Mediators of the relationship between racial identity and life satisfaction in a community sample of African American women and men. *Cultural Diversity and Ethnic Minority Psychology, 17,* 89–97.

Yassine, J., & Tipton-Fisler, L. A. (2021). Independent contingency and token economy at recess to reduce aggression. *Contemporary School Psychology*, 1–11.

Yau, J. C., & Reich, S. M. (2019). "It's just a lot of work": Adolescents' self-presentation norms and practices on Facebook and Instagram. *Journal of Research on Adolescence*, *29*(1), 196–209. https://doi.org/10.1111/jora.12376

Yi, K. (2014). Toward formulation of ethnic identity beyond the binary of White oppressor and racial other. *Psychoanalytic Psychology, 31*(3), 426–434. https://doi.org/10.1037/a0036649

Yin, Q., Wu, L., Yu, X., & Liu, W. (2019). Neuroticism predicts a long-term PTSD after earthquake trauma: The moderating effects of personality. *Frontiers in Psychiatry*, *10*, 657.

Yin, W. (2022). External locus of control and elementary teachers' subjective wellbeing: Self-efficacy as a mediator. *Social Behavior and Personality: An International Journal*, *50*(6), 40–48.

Yoneda, T., Graham, E., Lozinski, T., Bennett, D. A., Mroczek, D., Piccinin, A. M., Hofer, S. M., & Muniz-Terrera, G. (2023). Personality traits, cognitive states, and mortality in older adulthood. *Journal of Personality and Social Psychology, 124*(2), 381–395. https://doi.org/10.1037/pspp0000418

Yorke, L., & Dallos, R. (2015). An interpretative phenomenological analysis and repertory grid exploration of anger in young offenders. *Journal of Constructivist Psychology*, *28*(2), 126–138.

Young, A. G., & Shtulman, A. (2020). Children's cognitive reflection predicts conceptual understanding in science and mathematics. *Psychological Science*, *31*(11), 1396–1408. https://doi.org/10.1177/0956797620954449

Young, J. L. (2015). Test or toy? Materiality and the measurement of infant intelligence. *History of Psychology*, *18*(2), 103.

Young-Bruehl, E. (1988). *Anna Freud: A biography*. New York: Summit Books.

Yu, C. (2010). Contemporary Chinese sex symbols in dreams. *Dreaming, 20,* 25–41.

Yu, C. K. C. (2012). The effect of sleep position on dream experiences. *Dreaming, 22*(3), 212–221.

Yu, C. K. C. (2015). One hundred typical themes in most recent dreams, diary dreams, and dreams spontaneously recollected from last night. *Dreaming*, *25*(3), 206.

Yu, C. K.-C., & Liu, T.-W. (2022). Indigenous Chinese personality and dream content of Hong Kong and Taiwanese people. *Dreaming*, *32*(2), 173–182. https://doi.org/10.1037/drm0000197

Yu, K., Zhang, Y., Li, C., Wang, Q., Tan, Y., & Shao, Y. (2012). An analysis of personality traits of Chinese military medical peacekeepers in Lebanon. *Social Behavior and Personality: An International Journal*, *40*(1), 169–174.

Yu, X., & Fan, G. (2016). Direct and indirect relationship between locus of control and depression. *Journal of Health Psychology*, *21*(7), 1293–1298.

Zajonc, R. B. (2001). The family dynamics of intellectual development. *American Psychologist, 56,* 490–496.

Zajonc, R. B., Markus, H., & Markus, G. B. (1979). The birth order puzzle. *Journal of Personality and Social Psychology, 37,* 1325–1341.

Zanon, C., Bastianello, M., Pacico, J., & Hutz, C. (2014, July). The importance of personality and parental styles on optimism in adolescents. *Spanish Journal of Psychology, 17,* Article e47.

Zaretsky, E. (2004). *Secrets of the soul: A social and cultural history of psychoanalysis*. New York: Knopf.

Zeb, N., Naqvi, A., & Zonash, R. (2013). Big Five personality traits and ego-resilience in amputee soldiers. *Journal of Behavioral Sciences, 23,* 102–116.

Zebrowitz, L., Kikuchi, M., & Fellous, J. (2010). Facial resemblance to emotions: Group differences, impression effects, and race stereotypes. *Journal of Personality and Social Psychology, 98,* 175–189.

Zeidner, M. (1993). Coping with disaster: The case of Israeli adolescents under threat of missile attack. *Journal of Youth and Adolescence, 22,* 89–108.

Zhai, Q., Willis, M., O'Shea, B., Zhai, Y., & Yang, Y. (2013). Big Five personality traits, job satisfaction and subjective wellbeing in China. *International Journal of Psychology, 48,* 1099–1108.

Zhang, D., & He, H. (2010). Personality traits and life satisfaction: A Chinese case study. *Social Behavior and Personality, 38*(8), 1119–1132.

Zhang, F., & Parmley, M. (2011). What your best friend sees that I don't see: Comparing female close friends and casual acquaintances on the perception of emotional facial expressions of varying intensities. *Personality and Social Psychology Bulletin, 37,* 28–39.

Zhang, J. W., Chen, S., & Tomova Shakur, T. K. (2020). From me to you: Self-compassion predicts acceptance of own and others' imperfections. *Personality and Social Psychology Bulletin*, *46*(2), 228–242.

Zhang, M., Xin, Z., & Lin, C. (2012). Measures of cognitive complexity and its development in Chinese adolescents. *Journal of Constructivist Psychology*, *25*(2), 91–111.

Zhao, C., Wang, J., Feng, X., & Shen, H. (2020). Relationship between personality types in MBTI and dream structure variables. *Frontiers in Psychology*, *11*, 1589.

Zhao, H., Zhang, H., Xu, Y., He, W., & Lu, J. (2019). Why are people high in dispositional awe happier? The roles of meaning in life and materialism. *Frontiers in Psychology*, *10*, 1208. https://doi.org/10.3389/fpsyg.2019.01208

Zheng, H., Ming-Yi, Q., Chun-Li, Y., Jing, N., Jing, D., & Xiao-Yun, Z. (2006). Correlated factors comparison: The trends of computer game addiction and Internet relationship addiction. *Chinese Journal of Clinical Psychology, 14,* 244–247.

Zhou, C., Yue, X. D., Zhang, X., Shangguan, F., & Zhang, X. Y. (2021). Self-efficacy and mental health problems during COVID-19 pandemic: A multiple mediation model based on the Health Belief Model. *Personality and Individual Differences*, *179*, 110893.

Zhuo, J. (2010, November 30). Where anonymity breeds contempt. *New York Times*.

Zhou, Q., Guo, S., & Lu, H. J. (2020). Well-being and health of children in rural China: The roles of parental absence, economic status, and neighborhood environment. *Applied Research in Quality of Life*.

Zhu, B. L., & Dai, Z. H. (1988). The revise of the Chinese norm of Cattell's 16PF. *Psychological Science in China*, *6*, 1988.

Zhu, N., Hawk, S. T., & Chang, L. (2019). Unpredictable and competitive cues affect prosocial behaviors and judgements. *Personality and Individual Differences, 138*, 203–211. https://doi.org/10.1016/j.paid.2018.10.006

Zimmer, C. (2011, January 26). More to a smile than lips and teeth. *New York Times*.

Zimmerman, B. J. (1995). Self-efficacy and educational development. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 202–231). Cambridge University Press.

Zucchi, J., Bacheller, L., & Muscarella, F. (2012). *Learned helplessness and bullying: At risk for cyberbullying.* American Psychological Association Convention Presentation. http://psycnet.apa.org/psycextra/649952012-001.pdf

Zucker, A., Ostrove, J., & Stewart, A. (2002). College educated women's personality development in adulthood: Perceptions and age differences. *Psychology and Aging, 17,* 236–244.

Zuckerman, M. (1983). *Biological bases of sensation seeking, impulsivity, and anxiety*. Erlbaum.

Zuckerman, M. (1990). The psychophysiology of sensation seeking. *Journal of Personality, 58,* 313–345.

Zuckerman, M. (1993). Out of sensory deprivation and into sensation seeking: A personal and scientific journey. In G. G. Brannigan & M. R. Merrens (Eds.), *The undaunted psychologist: Adventures in research* (pp. 45–57). Temple University Press.

Zuckerman, M. (1994a). *Behavioral expressions and biosocial bases of sensation seeking*. Cambridge University Press.

Zuckerman, M. (1994b). Impulsive unsocialized sensation seeking: The biological foundations of a basic dimension of personality. In J. E. Bates & T. D. Wachs (Eds.), *Temperament: Individual differences at the interface of biology and behavior* (pp. 219–255). American Psychological Association.

Zuckerman, M. (2004). The shaping of personality: Genes, environments, and chance encounters. *Journal of Personality Assessment, 82,* 11–22.

Zuckerman, M. (2013). Biological bases of personality. In T. Howard, J. Suls, & I. Weiner (Eds.), *Handbook of psychology: Vol. 5. Personality and social psychology* (2nd ed., pp. 27–42). Wiley.

Zuckerman, M., & Aluja, A. (2015). Measures of sensation seeking. In G. Boyle, D. Saklofske, & Matthews, G. (Eds.), *Measures of personality and social psychological constructs* (pp. 352–380). Elsevier.

Zunshine, L. (Ed.). (2010). *Introduction to cognitive cultural studies*. Johns Hopkins University Press.

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